

• SERVICE  
MANUAL

PM-75

4822 725 50864

483

• **marantz**®

model PM-75

• *Digital Integrated Amplifier*

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

### ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

### PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA	FINLAND	GREAT BRITAIN	SAUDI ARABIA	SWITZERLAND
HORNYPHON	MARANTZ	MARANTZ AUDIO U.K. Ltd	AL ALAMIAH ELECTRONICS	MARANTZ
Vertriebsgesellschaft GmbH	DIVISION OF OY PHILIPS Ab	Unit 15/16	P.O.Box 5954	Technischer Service
Wienerbergstrasse 1	Kaivokatu 8	Saxon Way Industrial Estate	University Street	Duenstrasse 3
A 1101 Wien	00100 Helsinki	Moor Lane	Riyadh 11432	3186 Duedingen
Austria	Finland	Harmondsworth UB7 OLW	Saudi Arabia	Switzerland
Telex: 132.332	Telex: 124811	Great Britain	Telex: 401530	
		Telex: 935196		
BELGIUM	FRANCE	GREECE	SOUTH AFRICA	TURKEY
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Industrialaan 1	4 Rue Bernard Palissy	P.O.Box 21025	DIVISION OF PHILIPS S.A.	I.M.C.
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		Telex: 216.795	South Africa	Turkey
				Telex: 22085
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DIVISION OF PHILIPS S.A.	Alexanderstrasse 1	35-1, 7-chome, Sagamiono	Ignacio Iglesias 10	Republic Street, 68D
Av. Santa Maria, 0760	2000 Hamburg	Sagamihara-shi, Kanagawa	Badalona (Barcelona)	Valetta
Asilla 2687	Germany	Japan	Spain	Telex: 1682
Santiago			Telex: 59355	
Telex: 240.239				
DENMARK	THE NETHERLANDS	KUWAIT	SWEDEN	PORTUGAL
MARANTZ	Elpro Marantz	AL ALAMIAH ELECTRONICS	MARANTZ	MARANTZ
DIVISION OF PHILIPS	Wint Hontlaan 28	Ussama Building	DIVISION OF PHILIPS	Divisao philips S.A. service
SERVICE A/S	3526 KV Utrecht	Fahd al Saleem Street	Försäljning AB	Outurela-carnaxide
Prags Boulevard 80	The Netherlands	P.O.Box 23781	Tegeluddsvägen 1	2795 LinDA-A-VELHA
Postbox 1919	Telex: 4748	Safat-Kuwait	S-115 84 Stockholm	Telex: 43906
DK-2300 København S		Telex: 22694	Sweden	
Denmark			Telex: 14060	
Telex: 31201				
NORWAY	MARANTZ	ITALY		
	DIVISION OF PHILIPS A/S	MARANTZ ITALIANA S.P.A.		
	Sandstuveien 40	Via Chiese, 74		
	0680 Oslo 6	20126 Milano		
	Norway	Italy		
	Telex: 72640			

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5600 MD Eindhoven  
The Netherlands  
Phone: +31/40.758290  
Telefax: +31/40.75.82.99  
Telex: 35000 PHTC NL routing IND NLMTFAT

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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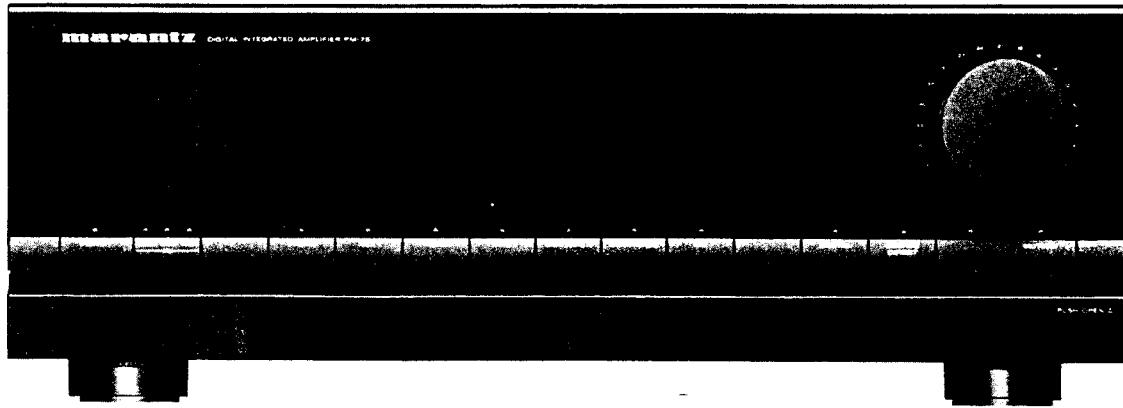
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### How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever. In case of ordering, please establish the parts number of 12 N/C'S following the procedure mentioned in this service manual "How to establish the parts number for common parts".

1) Please correctly write the parts number of 12 N/C'S following the rule.

# MODEL PM-75 DIGITAL INTEGRATED AMPLIFIER



## 1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM-75 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tone/Loudness/  
Balance ..... mounted on P.W. Board PE01
2. Master Volume ..... mounted on P.W. Board PG01
3. Motor Volume ..... mounted on P.W. Board PG51
4. Tape IN/OUT ..... mounted on P.W. Board PJ01
5. Micom ..... mounted on P.W. Board PU01
6. Rec Selecter ..... mounted on P.W. Board PU81
7. Phono Amp/Input ..... mounted on P.W. Board PV01
8. Speaker Terminal ..... mounted on P.W. Board PW01
9. Headphone/Speaker  
Switch ..... mounted on P.W. Board PW51
10. D/A Converter  
IN/OUT ..... mounted on P.W. Board P101
11. D/A Converter  
PLL ..... mounted on P.W. Board P201
12. D/A Converter  
FS IND ..... mounted on P.W. Board P271
13. Main Amp ..... mounted on P.W. Board P701
14. Power  
Transformer ..... mounted on P.W. Board P851
15. Power Switch ..... mounted on P.W. Board P901
16. Power  
Transformer ..... mounted on P.W. Board P951

## 2. ADJUSTMENT PROCEDURE (MAIN IDLING CURRENT)

1. Places for adjustment  
Left channel — R751 (470  $\Omega$ )  
Right channel — R752 (470  $\Omega$ )
2. Measuring points  
Left channel — TP-1 (-) TP-2 (+)  
Right channel — TP-3 (-) TP-4 (+)
3. Steps
  - (1) Connect a DC digital voltmeter to the test points.  
(Perform with the variable resistor set at minimum, no load, and the rated power supply voltage.)
  - (2) Apply 6 mV to 8 mV between TP-1 and TP-2, TP-3 and TP-4 (center value 7 mV).  
An idling current of 16.7 mA to 22.2 mA will flow at this time.  
The current will be approximately 19.4 mA when stabilized.

CAUTION: Conduct with the rated voltage, without gradually increasing the primary side power supply voltage (to prevent malfunction).  
Let set for about 1 minute after turning the power on before adjusting.

### 3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-75 Stereo Amplifier.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
ACVTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DCVTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer (0 to 140V AC, 10A)	Adjust level of primary power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

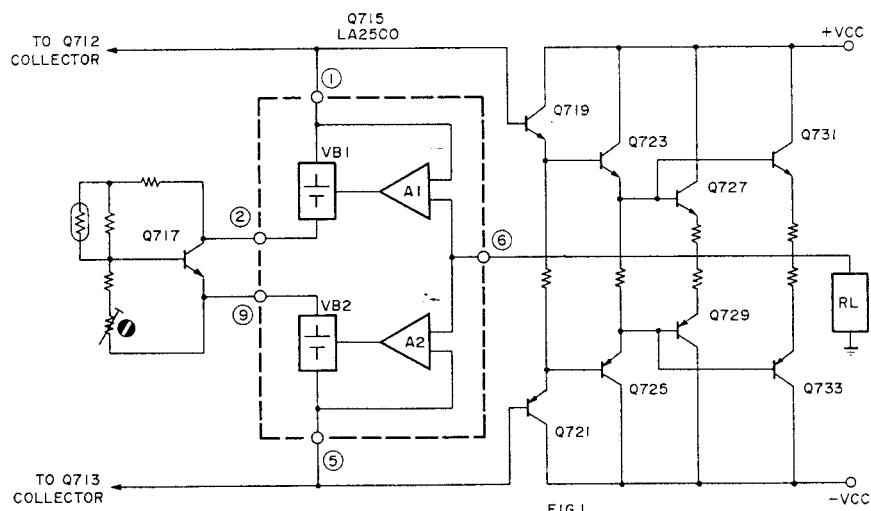
### 4. NON CUT-OFF CIRCUIT

#### A. Outline of Operation

Fig. 1 shows the configuration of the Power stage of the non cut-off circuit. The section enclosed by dotted lines corresponds to the bias circuit.

1. A1 and A2 detect the current variation in the Power stage, and apply the input, in the form of current, to the VB1 and VB2.

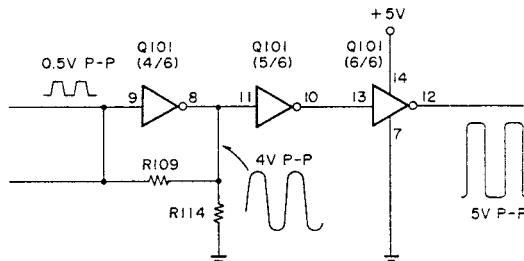
2. VB1 and VB2 receive the current output from A1 and A2, and convert the current into voltage in order to vary the base bias voltage of the Power stage.
3. Q717 is a constant-voltage circuit which sets the idle current in the Power stage and performs the temperature compensation.



## 5. DESCRIPTION OF DIGITAL CIRCUIT OPERATIONS

### 5.1 INPUT CIRCUIT

Q101 (1/6 to 6/6) and Q102 (4/6 to 6/6) make up a circuit which amplifies the 0.5 Vp-p digital signal level to the TTL level of 5 Vp-p and shapes the waveform. The amplifier in the first stage amplifies the signal up to about 4 Vp-p, and the inverter of the second and third stages shapes the waveform and sends the output to the following input selector circuit.



Q103 to Q105 form an input selector circuit using a NAND gate, which is controlled by the  $\mu$ -COM PU01. The selected signal with the level of 5 Vp-p is sent to the demodulator circuit in the next stage. On the other hand, the selected source signal is also sent to the REC OUT jack. The output at the REC OUT jack is 0.5 Vp-p/75 ohms, so the level with no load is 1 Vp-p.

### 5.2 DEMODULATOR CIRCUIT

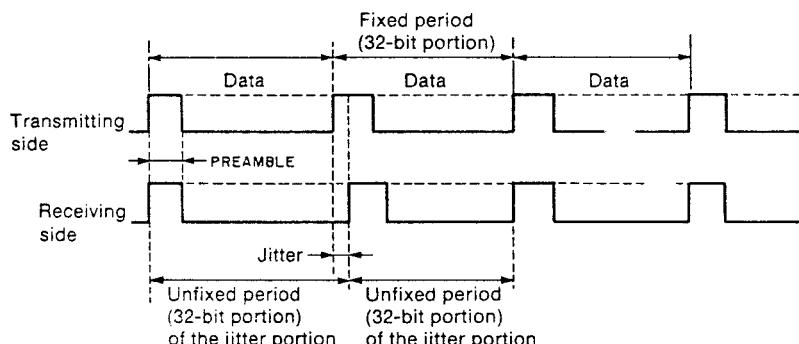
The demodulator (Q201) receives and reproduces the digital audio interface format signal. It incorporates a PLL circuit which is synchronized with the externally-supplied digital audio interface format signal. Therefore, the sampling frequency is automatically set according to the input.

### 5.3 JITTER KILLER CIRCUIT

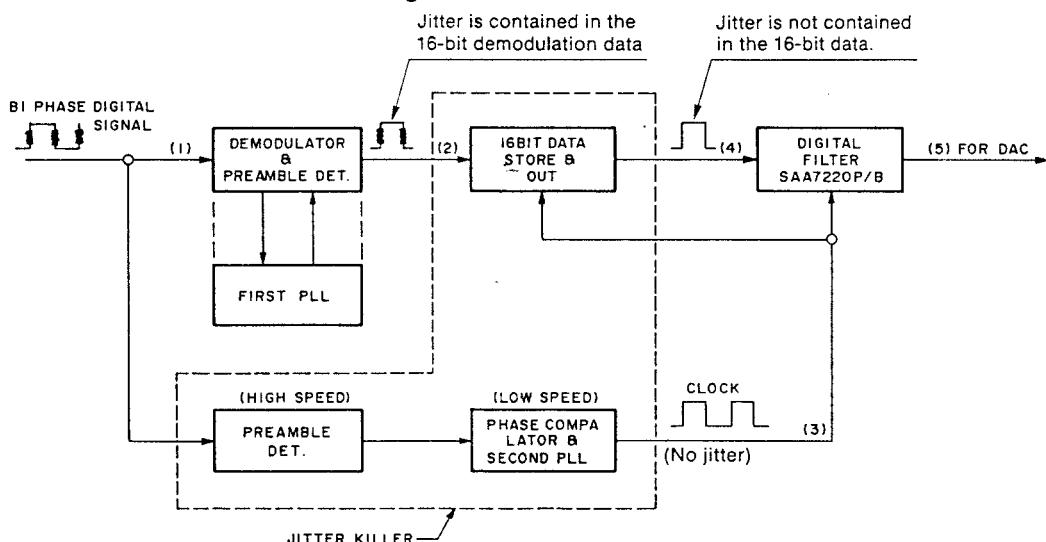
This circuit absorbs jitter (a wavering of the time axis, or a type of shifting distortion) which is generated in the optical transmission system.

The circuit utilizes a twin PLL system with memory. In particular, this circuit is effective in improving the distortion factor in the high region.

#### 5.3.1



#### 5.3.2 Jitter Killer Circuit Diagram



## 5.4 DIGITAL FILTER

The digital filter (Q222) handles the following functions.

1. Data interpolation in case of error.
2. Attenuation.
3. Muting.
4. Finite impulse response transversal filtering with quadruple oversampling rate.
5. Digital analog output.

## 5.5 DAC (Q112)

This is a 16-bit dual digital-to-analog converter.

## 5.6 I/V CONVERTER

- Q115 is the I/V converter, which inputs digital signal of the standard input level (0.5 Vp-p) and outputs an analog output voltage of 2 Vrms at point (A).
- Q113 is the de-emphasis ON/OFF switch which is controlled by Q201.

	Q201 Pin 16 (DEF) Out
a When input data is emphasized	H
b When input data is not emphasized	L

### —Twin PLL System with Memory—

In terms of sound quality, the PLL has good slow-speed (narrow bandwidth) characteristics, and good high-speed (wide bandwidth) characteristics from the point of the decoder response, presenting a reciprocal relationship. To deal with this situation, two PLL systems are established, a high-speed type and a slow-speed type. The decoder is controlled by the clock that has a lot of jitter, which has been produced by the high-speed PLL (1st PLL). The digital filter which is highly susceptible to sound quality and the DAC are controlled by the clock that has a small amount of jitter produced by the slow-speed PLL (2nd PLL). Note that the clock of the DAC is not directly supplied from the slow-speed PLL, rather, the supply is from the digital filter.

As a method of increasing the jitter margin, the word memory, which consists of a 16-bit shift register, is arranged in front of the digital filter. Data containing jitter which is sent from the decoder is stored in this memory at once. When a one-word portion (16 bits) of data has accumulated, it is read by the clock that has a small amount of jitter (produced by the slow-speed 2nd PLL) and sent to the digital filter. All this is to say that the jitter contained in the data is absorbed by storing the jitter-containing data to memory by the word unit. Note that this circuit structure is the same as CD-12LE of the high end separate CD.

### —Circuit Operation—

1. Preamble Detector (Q213-1/4 to 4/4 and Q220-1/2, 2/2)  
This circuit detects the head signal occurring with each sample of 16-bit data and outputs it to the phase comparator (Q221) as a sync signal. The frequency is 88.2 kHz for 44.1 kHz sampling.

2. Second PLL (Low Speed)

This circuit is made up of phase comparator (Q221), low pass filter (Q229 and Q230) used for band control, VCO (Q231) which changes the oscillation frequency by means of the output voltage from the LPF, and frequency demultiplier (Q226-1/2, 2/2) which performs division (by 1/128) while accurately adjusting the duty cycle to 50%.

Concerning the basic operation of the circuit, first, the VCO oscillates at the previously set free-running frequency. Next, this frequency is divided by the demultiplier and the phase of the resultant signal is compared with the phase of the receive data sync signal by the phase comparator. A voltage corresponding to the phase difference is produced and fed back to the VCO via the LPF, and the oscillation frequency is changed in the direction that decreases the phase difference. In a short time, the frequency and the phase of the demultiplied signal become roughly equal to the input sync signal and they are locked in this condition. The receive data and the synchronized master clock (11.2896 MHz) pass through the output of the VCO and the NAND gate IC (Q223-3/4) and are then output to the digital filter.

## SERVICE INFORMATION

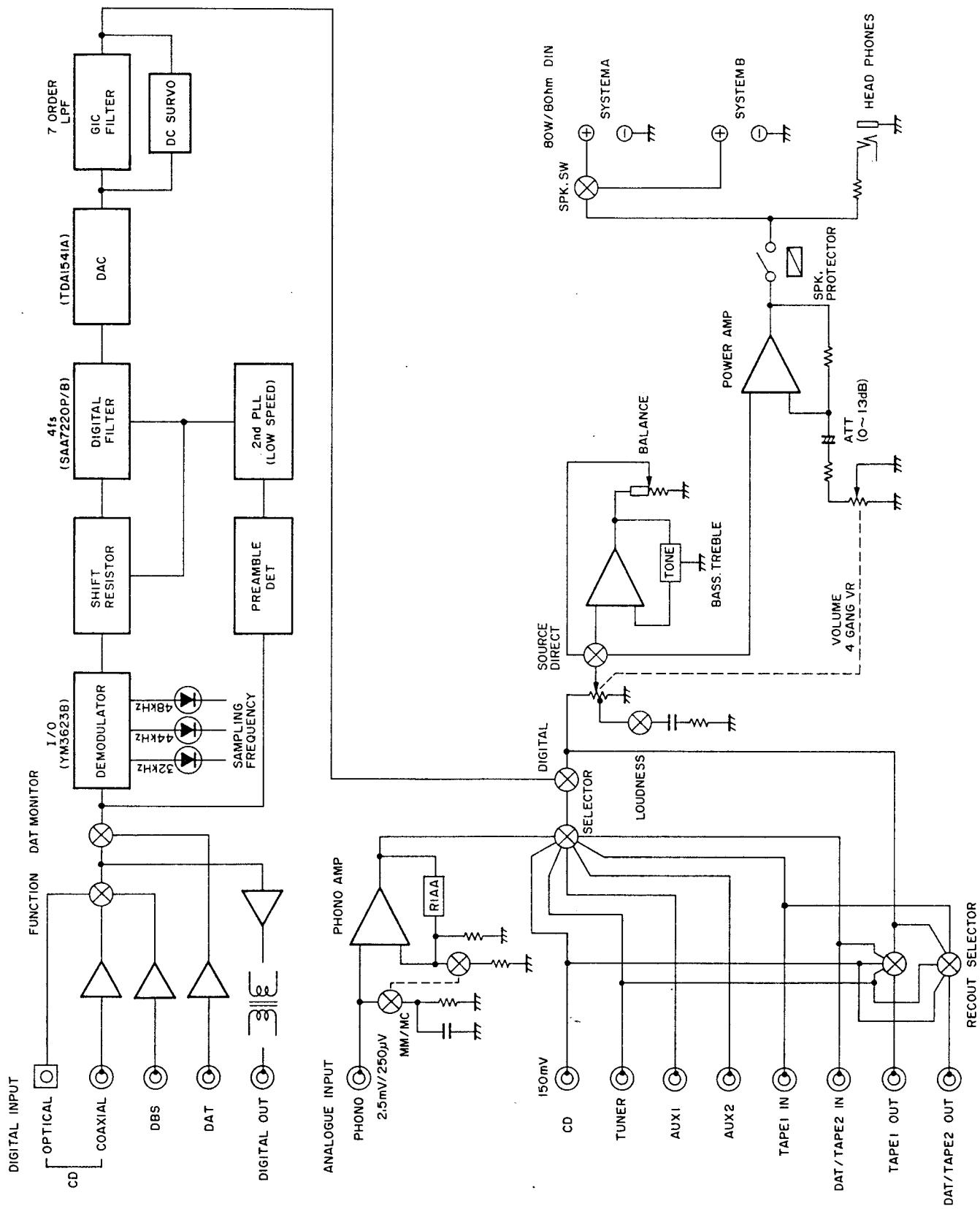
### 1. Function Initialize (Initial setting)

INPUT SELECTOR —	CD
DIGITAL —	OFF (ANALOGUE)
SOURCE DIRECT —	OFF (TONE IN)
MUTING —	OFF

### 2. SERVICE TEST PROGRAM

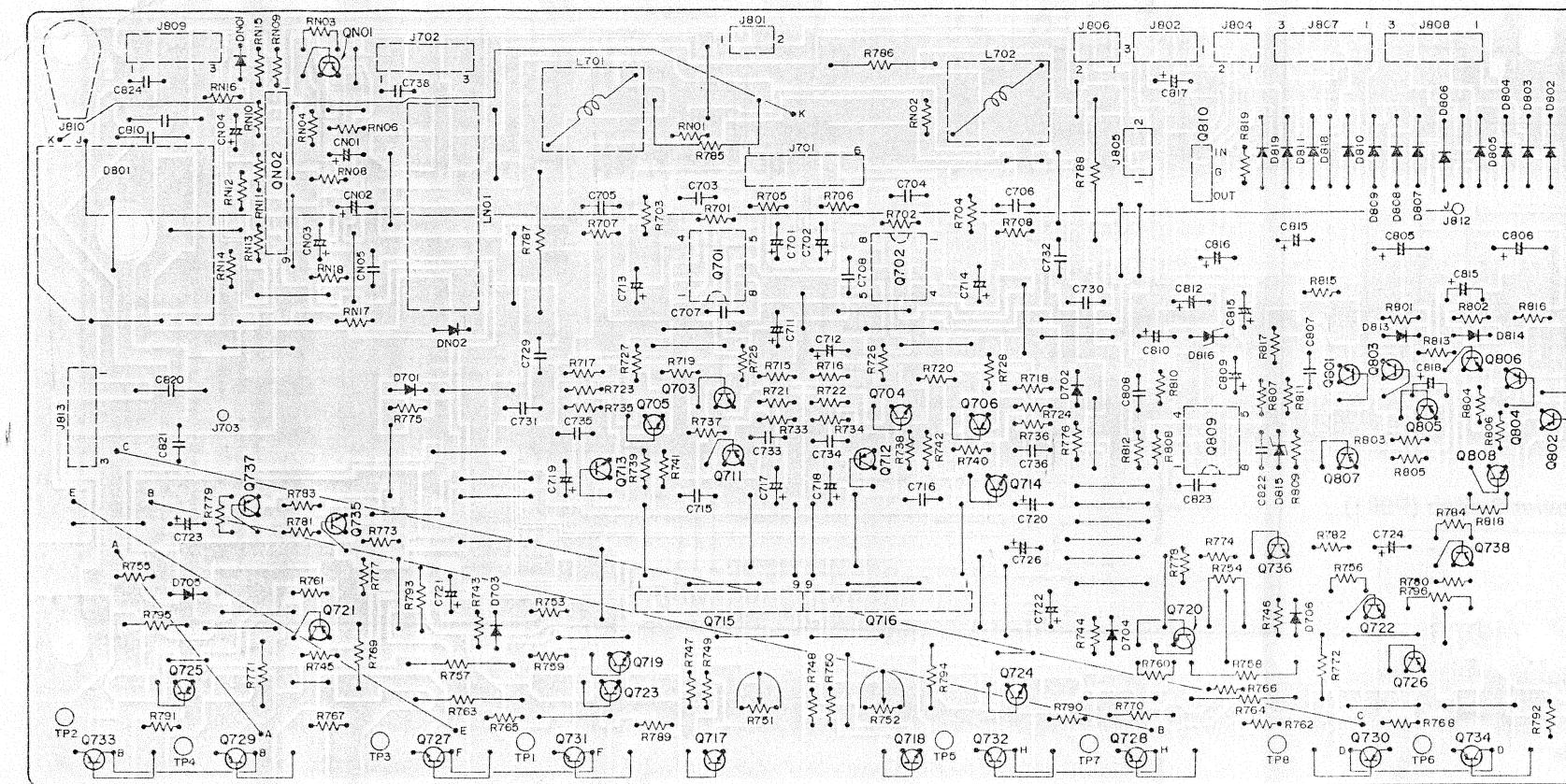
- 2-1. When the POWER is turned ON while pressing the PHONO, AUX 1 and AUX 2 keys simultaneously, the unit enters the test routine. Then, the speaker relay will be turned ON after 5 seconds. During this period, the volume level will automatically be lowered if the level is raised.
- 2-2. Then, press the CD, TUNER and TAPE 2 keys simultaneously to start test routine. The contents of the test routine is as shown below, and is performed repeatedly.
  - 1) The PHONO, AUX 1, AUX 2, TAPE 1, TAPE 2, TUNER, CD, DIGITAL, DIRECT and MUTING indicators are all lit twice. The setting of the SELECTOR switch is CD at this time.
  - 2) In the above order, the indicator and switch for each function will be changed in sequence, then all indicators will go out.
  - 3) About 5 seconds later, MUTING is turned ON and OFF, then test program is returned to step 1), and performed repeatedly.
- 2-3. To release the test routine, press the DIRECT and MUTING keys simultaneously.

## 6. BLOCK DIAGRAM

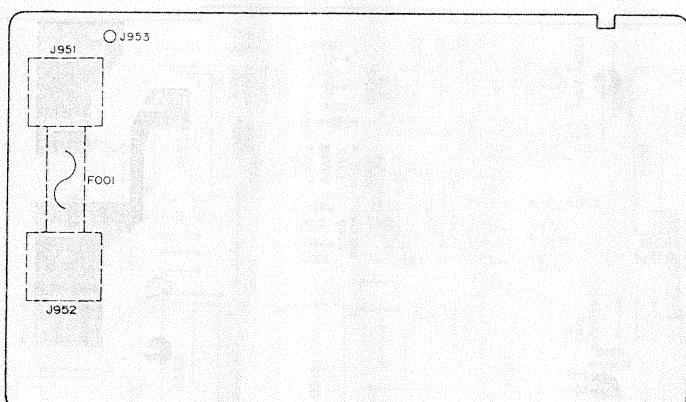


## 7. PARTS LOCATIONS (Pattern Side)

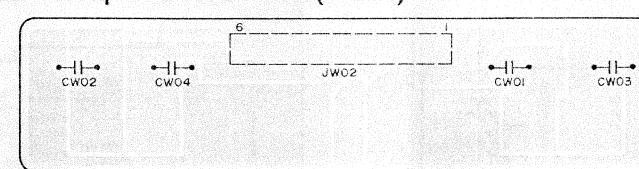
## 7.1 Main Amp (P701)



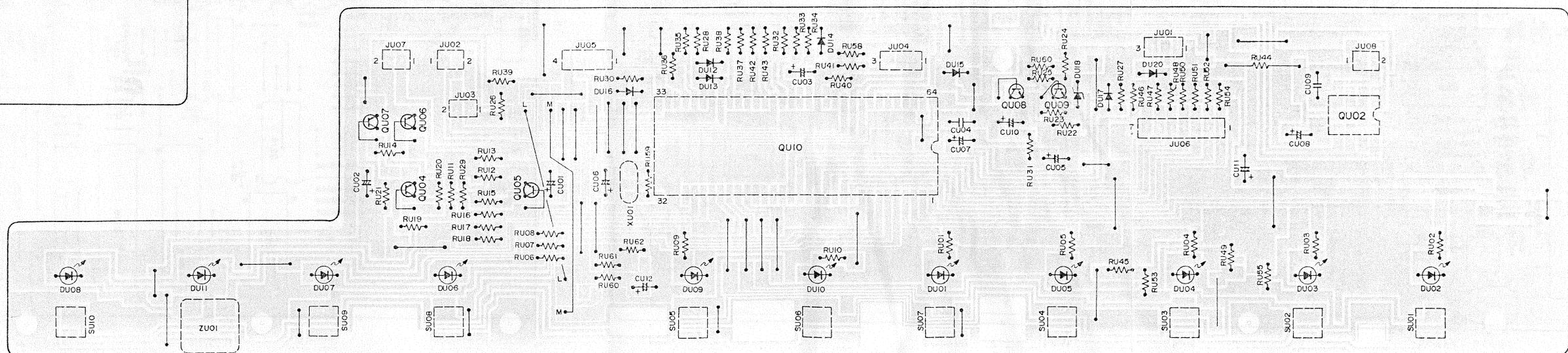
## 7.2 Power Transformer (P951)



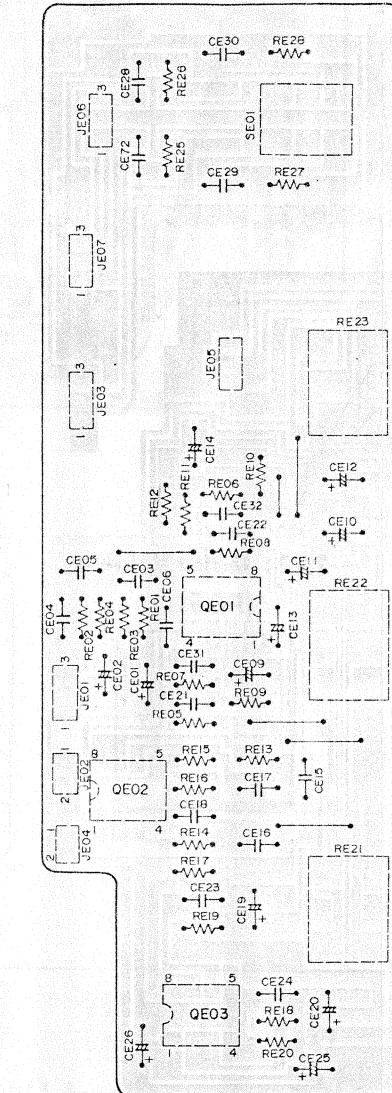
### 7.3 Speaker Terminal (PW01)



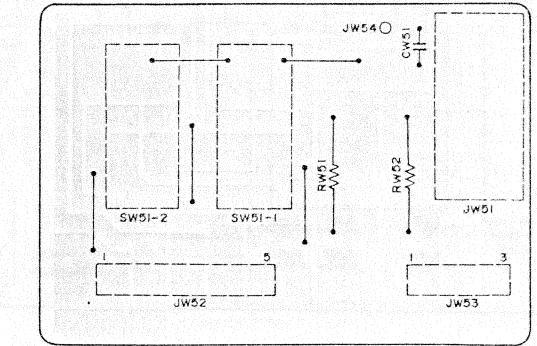
## 7.8 Micon (PU01)



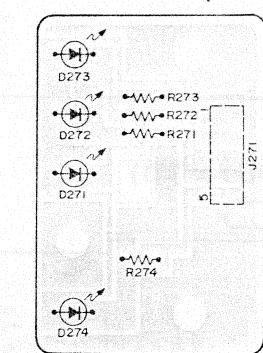
## 7.4 Tone/Loudness/ Balance Supply (PE01)



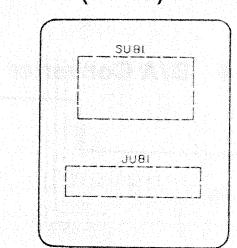
## 7.5 Headphone/Speaker Switch (PW51)



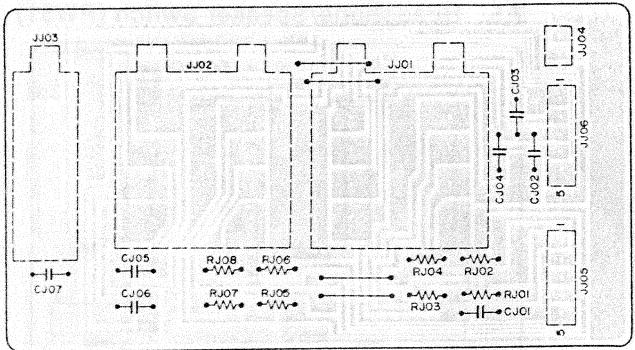
## 7.6 D/A Converter FS IND (P271)



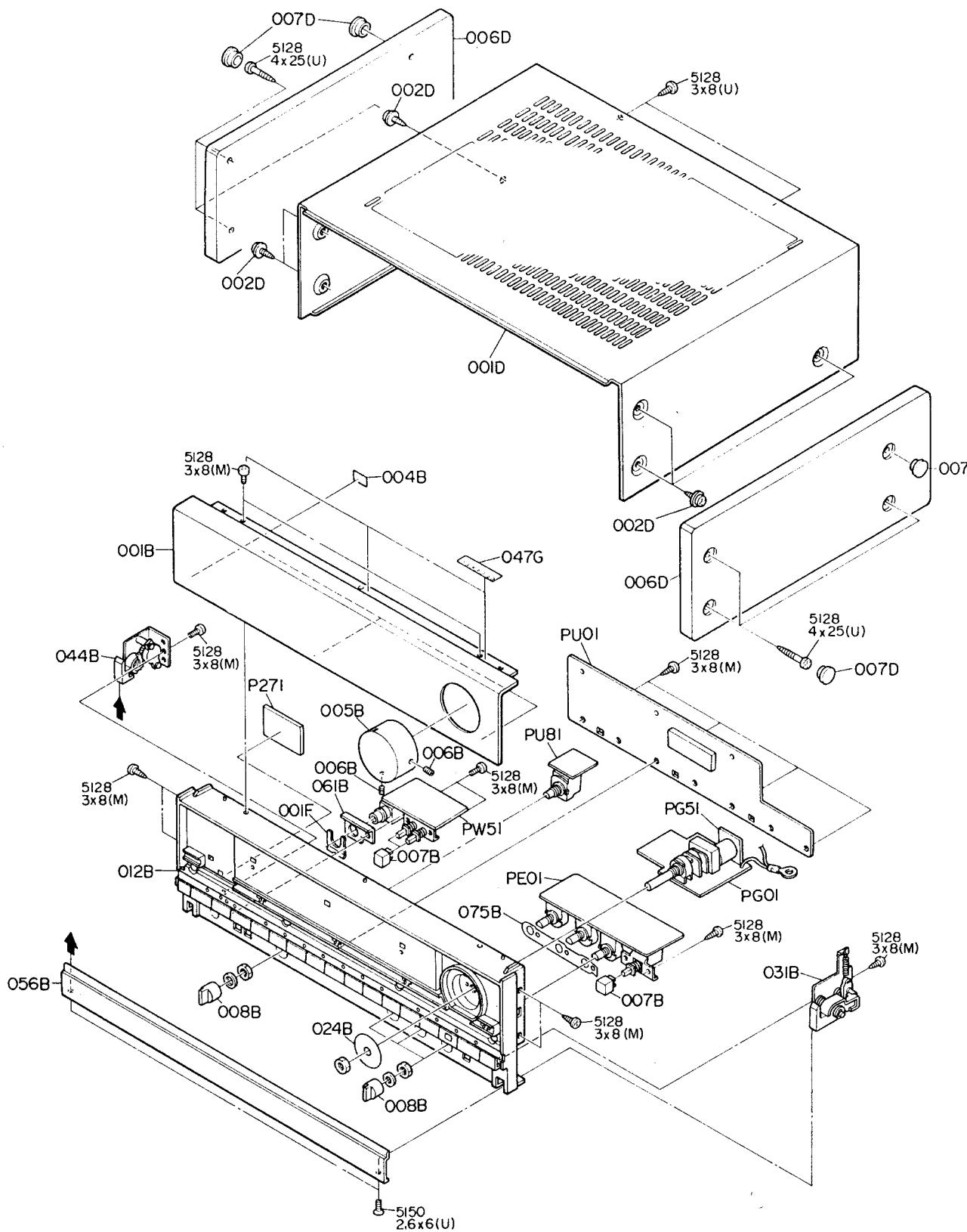
## 7.7 Rec Selector (PU81)



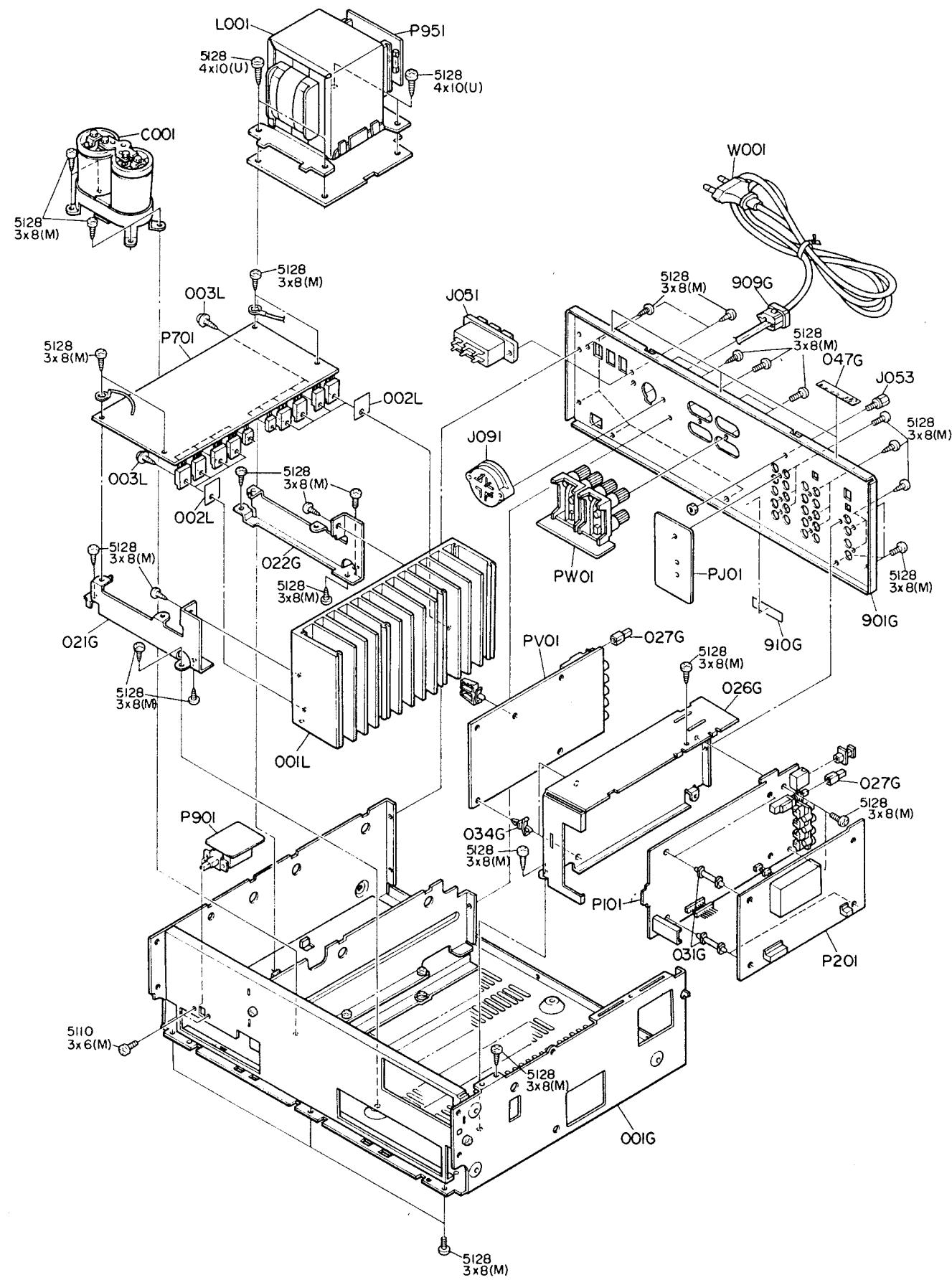
### 7.9 Tape IN/OUT (PJ01)



## 8. EXPLODED VIEW AND PARTS LIST



REF. DESIG.	PART NO.	DESCRIPTION
001B	4822 443 40738	Front Panel Assembly
007B	4822 410 26801	Button, Speaker/Loudness
008B	4822 413 41477	Knob, Rec/Tone/Balance
012B	4822 464 50747	Chassis Assembly, Front
031B	4822 403 53631	Front Arm (R) Assembly, Door
044B	4822 403 53632	Front Arm (L) Assembly, Door
056B	4822 459 80473	Escutcheon, Door
001D	4822 443 40739	Lid, Top Cover
002D	4822 532 11276	B.T. Screw B4 x 8
001F	4822 462 41037	Stopper, Phone Jack
001T	4822 736 20085	User Manual



REF. DESIG.	PART NO.	DESCRIPTION		
027G 047G	4822 412 20506 4822 535 71084	Knob, OPT-COAX/MM-MC Spacer		
901G	4822 443 51141 4822 443 51142	Rear Panel [N] Rear Panel [A, W]		
003L	4822 502 12512	B.T. Screw	B3 x 12	
△ C001	4822 124 22692	Elect Cap.	1500μF	63V
△ J051 J053	4822 267 30797 4822 266 30288	Jack, AC Outlet [E] Terminal, GND		
△ L001	4822 146 21377	Power Transformer		
△ J091	4822 272 10236 4822 272 10227	Voltage Selector [A, N, W] Voltage Selector [E]		

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
JG01	4822 265 10078	PG01-MISCELLANEOUS	JU03	4822 265 30641	PU01-MISCELLANEOUS
JG02	4822 265 10078	Plug, 3P	SU01	4822 276 12455	Plug, 2P
JG03	4822 265 30641	Plug, 3P	SU10		Push Switch, Tact
JG04	4822 265 10078	Plug, 2P	XU01	4822 242 72221	Ceramic Vibrator, CST4.00MT
JG05	4822 265 30641	Plug, 2P	ZU01	4822 130 10009	Photo Unit
JG06	4822 265 10078	Plug, 3P			
JG07	4822 265 30641	Plug, 2P			
JG10	4822 265 30473	Plug, 5P			
		PG51-MOTOR VOLUME CIRCUIT BOARD			
CG51	4822 122 40491	Ceramic Cap. 0.022μF +80% -20%	SU81	4822 273 80336	PU81-REC SELECTOR CIRCUIT BOARD
JG51	4822 265 30641	Plug, 2P			Rotary Switch, Rec Selector
		PJ01-TAPE IN/OUT CIRCUIT BOARD			PV01-PHONO AMP/INPUT CIRCUIT BOARD
CJ01	4822 122 32486	Ceramic Cap. 0.01μF +80% -20%	CV01	4822 122 32486	PV01-CAPACITORS
CJ02	4822 122 32486	Ceramic Cap. 0.01μF +80% -20%	CV08		Ceramic 0.01μF +80% -20%
CJ03	4822 122 40617	Ceramic Cap. 0.1μF +80% -20%	CV13	4822 124 22274	Elect 4.7μF 50V
JJ01	4822 265 30512	Terminal, 4P; RCA	CV14	4822 124 22274	Elect 4.7μF 50V
JJ02	4822 265 30512	Terminal, 4P; RCA	CV15	4822 124 22274	Elect 4.7μF 50V
JJ03	4822 266 30236	Terminal, 2P; RCA	CV16	4822 124 22274	Elect 4.7μF 50V
		PU01-MICOM CIRCUIT BOARD	C401	4822 121 42894	Film 150pF ±5% [A,E,W]
CU01	4822 124 41543	PU01-CAPACITORS	C402	4822 121 42894	Film 150pF ±5% [A,E,W]
CU02	4822 124 90359	Elect 1μF 50V	C407	4822 124 22279	Elect 2200μF 6.3V
CU04	4822 122 40491	Elect 10μF 16V	C408	4822 124 22279	Elect 2200μF 6.3V
CU05	4822 124 41592	Ceramic 0.022μF +80% -20%	C415	4822 124 22571	Elect 10μF 50V
CU06	4822 124 22274	Elect Big 0.1F	C416	4822 124 22571	Elect 10μF 50V
CU07	4822 124 41543	Elect 4.7μF 50V	C419	4822 124 22274	Elect 4.7μF 50V
CU08	4822 124 90352	Elect 1μF 50V	C420	4822 124 22274	Elect 4.7μF 50V
CU09	4822 122 40491	Elect 10μF 16V	C421	4822 124 22278	Elect 51μF 10V
CU10	4822 124 90353	Ceramic 0.022μF +80% -20%	C422	4822 124 22278	Elect 51μF 10V
CU11	4822 124 22694	Elect 100μF 10V	D401	4822 130 33305	PV01-SEMICONDUCTORS
CU12	4822 124 22273	Elect 1000μF 6.3V	D402	4822 130 33305	Diode 1SS176, etc.
		PU01-RESISTORS	QV01	4822 209 72357	Diode 1SS176, etc.
△ RU44	4822 116 60362	68Ω ±5% 1W	QV02	4822 209 72357	IC LC7821
		PU01-SEMICONDUCTORS	QV08	4822 130 60839	IC LC7821
DU01	4822 130 80326	L.E.D. CT3D8B	QV09	4822 130 60107	Transistor 2SC2458(Y, GR)
DU11			QV10	4822 130 60107	Transistor 2SA1048(Y, GR)
DU12	4822 130 33305	Diode 1SS176, etc.	QV11	4822 209 83804	Transistor 2SA1048(Y, GR)
DU13	4822 130 33305	Diode 1SS176, etc.	Q401	4822 130 42839	IC LC4966
DU15	4822 130 80839	Diode S5688G	Q404		
DU17	4822 130 33305	Diode 1SS176, etc.	Q405	4822 130 43233	F.E.T. 2SK369(BL)
DU18	4822 130 80316	Zener 3.6V	Q406	4822 130 43233	Transistor 2SC2240(GR, BL)
DU20	4822 130 80839	Diode S5688G	Q407	4822 209 73064	Transistor 2SC2240(GR, BL)
QU01	4822 209 73259	Microprocessor LC6554H	JV01	4822 267 20348	IC NJM2068DD
QU02	4822 209 73287	IC LB1630	JV02	4822 266 30285	PV01-MISCELLANEOUS
QU04	4822 130 60107	Transistor 2SA1048(Y, GR)	JV04	4822 265 30641	Terminal, 4P; RCA
QU05	4822 130 60839	Transistor 2SC2458(Y, GR)	JV05	4822 265 10078	Terminal, 6P; RCA
QU06	4822 130 60839	Transistor 2SC2458(Y, GR)	JV06	4822 265 10078	Plug, 2P
QU07	4822 130 60107	Transistor 2SA1048(Y, GR)			Plug, 3P
QU08	4822 130 60839	Transistor 2SC2458(Y, GR)			Plug, 3P
QU09	4822 130 60839	Transistor 2SC2458(Y, GR)			
QU10	4822 130 60839	Transistor 2SC2458(Y, GR)			

## 9. ELECTRICAL PARTS LIST

### ASSIGNMENT OF COMMON PARTS CODES.

#### RESISTOR

R\*\*\*: (1) GD05 --- 140, Carbon film fixed resistor,  $\pm 5\%$ , 1/4W  
 R\*\*\*: (2) GD05 --- 160, Carbon film fixed resistor,  $\pm 5\%$ , 1/6W

① — Resistance value

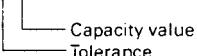
#### Examples

① Resistance value

0.1Ω...001	100Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	1000Ω...101	10kΩ...103	1MkΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MkΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

#### C\*\*\*: CERAMIC CAP.

(1) DD1 --- 370, Ceramic condenser  
 ① ② Disc type  
 ① ② Temp. coeff. P350 ~ N1000, 50V  


#### Examples

① Tolerance (Capacity deviation)

$\pm 0.25\text{pF} \dots 0$   
 $\pm 0.5\text{pF} \dots 1$   
 $\pm 5\% \dots 5$

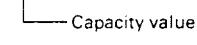
\* Tolerance of COMMON PARTS handled here are as follows:

0.5pF ~ 5pF  $\pm 0.25\text{pF}$   
 6pF ~ 10pF  $\pm 0.5\text{pF}$   
 12pF ~ 560pF  $\pm 5\%$

② Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

#### C\*\*\*: CERAMIC CAP.

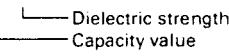
(1) DK16 --- 300, High dielectric constant ceramic condenser  
 ① Disc type  
 ① Temp. chara. 2B4, 50V  


#### Example

② Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

#### C\*\*\*: ELECTROLY CAP. ( $\frac{1}{2}$ ), FILM CAP. ( $\frac{1}{2}$ )

(1) EA --- 10, Electrolytic condenser  
 ① ② One-way lead type, Tolerance  $\pm 20\%$   


#### Examples

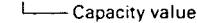
① Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...108
		2200μF...228

② Working voltage

6.3V...006	25V...025
10V...010	35V...035
16V...016	50V...050

(2) DF15 --- 350, Plastic film condenser

① One-way type, Mylar  $\pm 5\%$  50V  


#### Examples

① Capacity value

0.001μF (1000pF)...102	0.1μF...104
0.0018μF.....182	0.56μF...564
0.01μF.....103	1μF...105
0.015μF.....153	

REF. DESIG.	PART NO.	DESCRIPTION
		PE01-TONE/LOUDNESS/BALANCE CIRCUIT BOARD
		PE01-CAPACITORS
CE01	4822 124 22571	Elect $10\mu\text{F}$ 50V
CE02	4822 124 22571	Elect $10\mu\text{F}$ 50V
CE03	4822 121 42712	Film $100\text{pF}$ $\pm 5\%$
CE09	4822 124 22276	Elect $47\mu\text{F}$ 50V
CE10	4822 124 22276	Elect $47\mu\text{F}$ 50V
CE11	4822 124 22698	Elect $47\mu\text{F}$ 25V
CE12	4822 124 22698	Elect $47\mu\text{F}$ 25V
CE13	4822 124 22571	Elect $10\mu\text{F}$ 50V
CE14	4822 124 22571	Elect $10\mu\text{F}$ 50V
CE17	4822 121 51348	Film $56\text{pF}$ $\pm 10\%$
CE18	4822 121 51348	Film $56\text{pF}$ $\pm 10\%$
CE19	4822 124 22696	Elect $3.3\mu\text{F}$ 50V
CE20	4822 124 22696	Elect $3.3\mu\text{F}$ 50V
CE21	4822 122 32143	Ceramic $22\text{pF}$ $\pm 5\%$
CE22	4822 122 32143	Ceramic $22\text{pF}$ $\pm 5\%$
CE25	4822 124 22274	Elect $4.7\mu\text{F}$ 50V
CE26	4822 124 22274	Elect $4.7\mu\text{F}$ 50V
CE27	4822 121 42872	Film $1000\text{pF}$ $\pm 5\%$
CE28	4822 121 42872	Film $1000\text{pF}$ $\pm 5\%$
		PE01-RESISTORS
RE21	4822 101 30574	$20\text{K}\Omega$ , Variable; Bass
RE22	4822 101 30574	$20\text{K}\Omega$ , Variable; Treble
RE23	4822 101 30575	$50\text{K}\Omega$ , Variable; Balance
		PE01-SEMICONDUCTORS
QE01	4822 209 83631	IC NJM4558D-D
QE02	4822 209 83631	IC NJM4558D-D
QE03	4822 209 83631	IC NJM4558D-D
		PE01-MISCELLANEOUS
JE01	4822 265 10078	Plug, 3P
JE02	4822 265 30641	Plug, 2P
JE03	4822 265 10078	Plug, 3P
JE04	4822 265 30641	Plug, 2P
JE05	4822 265 10078	Plug, 3P
JE06	4822 265 10078	Plug, 3P
JE07	4822 265 10078	Plug, 3P
SE01	4822 276 12504	Push Switch, Loudness
		PG01-MASTER VOLUME CIRCUIT BOARD
		PG01-CAPACITORS
CG02	4822 124 22274	Elect $4.7\mu\text{F}$ 50V
CG04	4822 124 22274	Elect $4.7\mu\text{F}$ 50V
CG05	4822 124 41543	Elect $1\mu\text{F}$ 50V
		PG01-RESISTORS
RG19	4822 101 30573	$500\text{Ω}$ , $50\text{K}\Omega$ (B) Motor; Variable
		PG01-SEMICONDUCTORS
QG01	4822 209 83804	IC LC4966
QG02	4822 209 83804	IC LC4966
QG03	4822 130 43819	Transistor 2SC2878(A)
QG04	4822 130 43819	Transistor 2SC2878(A)
QG05	4822 130 60107	Transistor 2SA1048(Y, GR)
QG06	4822 130 60839	Transistor 2SC2458(Y, GR)
QG07	4822 130 60107	Transistor 2SA1048(Y, GR)
QG08	4822 130 60107	Transistor 2SA1048(Y, GR)

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
L401	4822 156 11019	Choke Coil, 320 $\mu$ H [N]	C156	4822 124 22571	Elect 10 $\mu$ F 50V
L402	4822 156 11019	Choke Coil, 320 $\mu$ H [N]	C171	4822 124 22571	Elect 10 $\mu$ F 50V
S401	4822 276 20468	Push Switch, MC/MM	C172	4822 124 22571	Elect 10 $\mu$ F 50V
		<b>PW01-SPEAKER TERMINAL CIRCUIT BOARD</b>	C173	4822 124 22571	Elect 10 $\mu$ F 50V
JW01	4822 266 30323	Terminal, Speaker [N]	C174	4822 124 22571	Elect 10 $\mu$ F 50V
JW02	4822 265 20205	Plug, 3P	C185	4822 124 22571	Elect 10 $\mu$ F 50V
JW03	4822 265 20205	Plug, 3P	C186	4822 124 22571	Elect 10 $\mu$ F 50V
JW04	4822 265 10093	Jack, 3P	C187	4822 124 22571	Elect 10 $\mu$ F 50V
JW05	4822 265 10093	Jack, 3P	C188	4822 124 22571	Elect 10 $\mu$ F 50V
			C189	4822 121 42738	Film 820pF $\pm$ 5%
		<b>PW51-HEADPHONE/SPEAKER SWITCH CIRCUIT BOARD</b>	C190	4822 121 42738	Film 820pF $\pm$ 5%
CW51	4822 122 40516	Ceramic Cap. 0.01 $\mu$ F +80% -20% [N]	C191	4822 124 90371	Elect 470 $\mu$ F 10V
RW51	4822 111 50474	Resistor 330 $\Omega$ $\pm$ 5% 1W	C193	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%
RW52	4822 111 50474	Resistor 330 $\Omega$ $\pm$ 5% 1W	C194	4822 122 40617	Ceramic 0.01 $\mu$ F +80% -20%
JW51	4822 264 10132	Jack, Headphone (GLD)	C196	4822 122 40516	Ceramic 0.01 $\mu$ F +80% -20%
	4822 267 30617	Jack, Headphone (BLK)			
JW52	4822 265 10117	Plug, 5P			
JW53	4822 265 20205	Plug, 3P			
SW51	4822 276 20467	Push Switch			
		<b>P101-D/A CONVERTER IN/OUT CIRCUIT BOARD</b>			
		<b>P101-CAPACITORS</b>			
C101	4822 124 22275	Elect 47 $\mu$ F 10V	$\triangle$ Q111	4822 209 83825	IC NJM79L05A
C102	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q112	4822 209 72969	IC TDA1541A/N2
C103	4822 122 32143	Ceramic 22pF $\pm$ 5%	Q113	4822 130 42842	F.E.T. 2SK372(GR, BL)
C104	4822 124 22275	Elect 47 $\mu$ F 10V	Q114	4822 130 42842	F.E.T. 2SK372(GR, BL)
C106	4822 124 22275	Elect 47 $\mu$ F 10V	Q115	4822 209 73064	IC NJM2068DD
C108	4822 124 22275	Elect 47 $\mu$ F 10V	Q116	4822 209 73064	IC NJM2068DD
C110	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q117		
C111	4822 124 22275	Elect 47 $\mu$ F 10V	Q122	4822 209 83274	IC NJM4560D-D
C112	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q123	4822 209 73064	IC NJM2068DD
C113	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%			
C114	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	$\triangle$ Q124	4822 209 83824	IC NJM7805FA
C115	4822 122 40617	Ceramic 0.1 $\mu$ F +80% -20%	Q125	4822 130 43819	Transistor 2SC2878(A)
C128			Q126	4822 130 43819	Transistor 2SC2878(A)
C130	4822 121 42713	Film 680pF $\pm$ 5%	Q127	4822 130 43819	Transistor 2SC2878(A)
C131	4822 124 41539	Elect 47 $\mu$ F 16V	Q128	4822 130 43819	Transistor 2SC2878(A)
C132	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%			
C133	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	J101	4822 264 30217	<b>P101-MISCELLANEOUS</b>
C134	4822 124 90363	Elect 220 $\mu$ F 10V	J102	4822 266 30324	Jack, OPT Connector
C135	4822 124 41539	Elect 47 $\mu$ F 16V	J105	4822 265 10078	Terminal, Digital Input
C136	4822 124 22275	Elect 47 $\mu$ F 10V	J106	4822 265 30641	Plug, 3P
C137	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	J107	4822 265 30641	Plug, 2P
C138	4822 124 41539	Elect 47 $\mu$ F 16V	L101	4822 157 53801	Choke Coil, 47 $\mu$ H
C139	4822 124 22275	Elect 47 $\mu$ F 10V	L102	4822 157 53801	Choke Coil, 47 $\mu$ H
C140	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	L103	4822 142 60388	Pulse Transformer
C145	4822 121 42713	Film 680pF $\pm$ 5%	L104	4822 157 53801	Choke Coil, 47 $\mu$ H
C146	4822 121 42713	Film 680pF $\pm$ 5%			
C153	4822 124 22571	Elect 10 $\mu$ F 50V	S101	4822 276 20458	Push Switch
C154	4822 124 22571	Elect 10 $\mu$ F 50V			
C155	4822 124 22571	Elect 10 $\mu$ F 50V			

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		<b>P201-D/A CONVERTER PLL CIRCUIT BOARD</b>	Q201	4822 209 73668	IC YM3623B
		<b>P201-CAPACITORS</b>	Q202	4822 209 11767	IC 4555
C201	4822 122 32143	Ceramic 22pF $\pm 5\%$	Q203	4822 130 60839	Transistor 2SC2458(Y, GR)
C203	4822 122 32143	Ceramic 22pF $\pm 5\%$	Q208	4822 130 42591	Transistor 2SA1175(FF, EF)
C204	4822 122 32143	Ceramic 22pF $\pm 5\%$	Q209	4822 130 42591	Transistor 2SA1175(FF, EF)
C205	4822 124 90352	Elect 10 $\mu$ F 16V	Q210	4822 130 42591	Transistor 2SA1175(FF, EF)
C206	4822 124 41543	Elect 1 $\mu$ F 50V	Q211	4822 130 42591	Transistor 2SA1175(FF, EF)
C207	4822 124 22273	Elect 0.47 $\mu$ F 50V	Q212	4822 130 42591	Transistor 2SA1175(FF, EF)
C208	4822 124 22273	Elect 0.47 $\mu$ F 50V	Q213	4822 209 73676	IC TC74HC86P
C209	4822 122 33656	Ceramic 39pF $\pm 5\%$	Q214	4822 209 72322	IC TC74HC00P
C210	4822 122 33657	Ceramic 56pF $\pm 5\%$	Q215	4822 209 73679	IC HD74HC673
C211	4822 121 42713	Film 680pF $\pm 5\%$	Q216	4822 209 73681	IC HD74HC674
C212	4822 122 32143	Ceramic 22pF $\pm 5\%$	Q217	4822 209 73677	IC TC74HC123P
C213	4822 122 32143	Ceramic 22pF $\pm 5\%$	Q218	4822 209 72333	IC TC74HC74P
C215	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q219	4822 209 72333	IC TC74HC74P
C216	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q220	4822 209 73677	IC TC74HC123P
C217	4822 121 51382	Film 560pF $\pm 5\%$	Q221	4822 209 73671	IC TC5081AP
C218	4822 124 90352	Elect 10 $\mu$ F 16V	Q222	4822 209 72545	IC SAA7220P/B
C219	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q223	4822 209 73675	IC TC74HC08P
C221	4822 124 41543	Elect 1 $\mu$ F 50V	Q224	4822 209 72333	IC TC74HC74P
C222	4822 124 90357	Elect 2.2 $\mu$ F 50V	Q225	4822 209 72333	IC TC74HC74P
C223	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q226	4822 209 73678	IC TC74HC393P
C224	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q227	4822 209 73677	IC TC74HC123P
C225	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q228	4822 209 72323	IC TC74HCU04P
C226	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	Q229	4822 130 42842	F.E.T. 2SK372(GR, BL)
C228	4822 124 41539	Elect 47 $\mu$ F 16V	Q230	4822 130 60839	Transistor 2SC2458(Y, GR)
C229	4822 122 22698	Elect 47 $\mu$ F 25V	Q231	4822 130 61357	F.E.T. 2SK161(GR)
C230	4822 122 40617	Ceramic 0.1 $\mu$ F +80% -20%	Q232	4822 130 60839	Transistor 2SC2458(Y, GR)
C232	4822 124 41543	Elect 1 $\mu$ F 50V			<b>P201-MISCELLANEOUS</b>
C233	4822 121 42713	Film 680pF $\pm 5\%$	J202	4822 265 30639	Plug, 3P
C234	4822 122 32143	Ceramic 22pF $\pm 5\%$	L201	4822 157 53799	Choke Coil, 1.5 $\mu$ H
C238	4822 124 41543	Elect 1 $\mu$ F 50V	L202	4822 152 20662	Choke Coil, 150 $\mu$ H
C239	4822 122 40617	Ceramic 0.1 $\mu$ F +80% -20%			
C240	4822 122 32832	Ceramic 1000pF +80% -20%	X201	4822 242 72334	Crystal, 16.9344MHz
C241	4822 124 41543	Elect 1 $\mu$ F 50V			
C242	4822 122 32486	Ceramic 0.01 $\mu$ F +80% -20%			
C243	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%			
C244	4822 122 32486	Ceramic 0.01 $\mu$ F +80% -20%			
C245	4822 122 40306	Ceramic 0.047 $\mu$ F +80% -20%	D271	4822 130 80326	L.E.D. LT3D8B
C251			D272	4822 130 80326	L.E.D. LT3D8B
		<b>P201-RESISTORS</b>	D273	4822 130 80326	L.E.D. LT3D8B
R200	4822 116 60321	1 $\Omega$ $\pm 5\%$ 1W	D274	4822 130 80326	L.E.D. LT3D8B
R220	4822 116 80251	100K $\Omega$ $\pm 1\%$ 1/6W			
R221	4822 116 80959	7.5K $\Omega$ $\pm 1\%$ 1/6W			
R223	4822 116 80958	20K $\Omega$ $\pm 1\%$ 1/6W			
R224	4822 116 80957	13.3K $\Omega$ $\pm 1\%$ 1/6W			
R251	4822 115 90314	68 $\Omega$ $\pm 2\%$ 1/4W			
D201	4822 130 33305				
D207					<b>P701-MAIN AMP CIRCUIT BOARD</b>
D208	4822 130 80302	Varistor MA27A	CN01	4822 124 22276	
D209	4822 130 80302	Varistor MA27A	CN02	4822 124 90361	
D210	4822 130 31542	Varicap SVC321SP	CN04	4822 124 41543	
			CN05	4822 121 42708	
		<b>P201-SEMICONDUCTORS</b>			
		Diode 1SS176, etc.	C701	4822 124 22571	Elect 10 $\mu$ F 50V
			C702	4822 124 22571	Elect 10 $\mu$ F 50V
			C703	4822 121 42712	Film 100pF $\pm 5\%$
			C704	4822 121 42712	Film 100pF $\pm 5\%$
			C705	4822 123 30077	Mica 15pF $\pm 5\%$
			C706	4822 123 30077	Mica 15pF $\pm 5\%$
			C707	4822 123 30088	Mica 10pF $\pm 0.5pF$
			C711	4822 124 22571	Elect 10 $\mu$ F 50V
			C712	4822 124 22571	Elect 10 $\mu$ F 50V
			C713	4822 124 41541	Elect 470 $\mu$ F 35V

REF. DESIG.	PART NO.	DESCRIPTION
C714	4822 124 41541	Elect 470 $\mu$ F 35V
C715	4822 121 42708	Film 330pF $\pm$ 5%
C716	4822 121 42708	Film 330pF $\pm$ 5%
C717	4822 124 22693	Elect 10 $\mu$ F 63V
C718	4822 124 22693	Elect 10 $\mu$ F 63V
C719	4822 124 22693	Elect 10 $\mu$ F 63V
C720	4822 124 22693	Elect 10 $\mu$ F 63V
C721	4822 124 22693	Elect 10 $\mu$ F 63V
C722	4822 124 22693	Elect 10 $\mu$ F 63V
C723	4822 124 22693	Elect 10 $\mu$ F 63V
C724	4822 124 22273	Elect 10 $\mu$ F 63V
C733	4822 122 31205	Film 47pF $\pm$ 5%
C734	4822 122 31205	Film 47pF $\pm$ 5%
C735	4822 122 31205	Film 47pF $\pm$ 5%
C736	4822 122 31205	Film 47pF $\pm$ 5%
C738	4822 122 32486	Ceramic 0.01 $\mu$ F +80% -20%
C801	4822 122 40545	Ceramic 0.01 $\mu$ F $\pm$ 10%
C802	4822 122 40545	Ceramic 0.01 $\mu$ F $\pm$ 10%
C805	4822 124 22695	Elect 2200 $\mu$ F 35V
C806	4822 124 22695	Elect 2200 $\mu$ F 35V
C807	4822 121 42712	Film 100pF $\pm$ 5%
C808	4822 121 42712	Film 100pF $\pm$ 5%
C809	4822 124 90359	Elect 100 $\mu$ F 10V
C810	4822 124 90359	Elect 100 $\mu$ F 10V
C811	4822 124 41535	Elect 100 $\mu$ F 25V
C812	4822 124 41535	Elect 100 $\mu$ F 25V
C815	4822 124 22697	Elect 3300 $\mu$ F 10V
C816	4822 124 22275	Elect 47 $\mu$ F 10V
C817	4822 124 22275	Elect 47 $\mu$ F 10V
C818	4822 124 90361	Elect 22 $\mu$ F 25V
C819	4822 124 90361	Elect 22 $\mu$ F 25V
C820	4822 121 42643	Film 0.1 $\mu$ F 10%
C821	4822 121 42643	Film 0.1 $\mu$ F 10%
RN17	4822 116 60416	P701-RESISTORS 1K $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R743	4822 115 90198	33 $\Omega$ , Fuse $\pm$ 2% $\frac{1}{4}$ W
$\Delta$ R746	4822 100 11426	470 $\Omega$ , Trimming
R751	4822 100 11426	470 $\Omega$ , Trimming
R752	4822 100 11426	470 $\Omega$ , Trimming
$\Delta$ R753	4822 115 90166	10 $\Omega$ $\pm$ 2% $\frac{1}{4}$ W
$\Delta$ R754	4822 115 90166	10 $\Omega$ $\pm$ 2% $\frac{1}{4}$ W
$\Delta$ R755	4822 115 90166	10 $\Omega$ $\pm$ 2% $\frac{1}{4}$ W
$\Delta$ R756	4822 115 90166	10 $\Omega$ $\pm$ 2% $\frac{1}{4}$ W
R759	4822 111 91291	10 $\Omega$ $\pm$ 5% 1/6W
R762	4822 116 60319	220 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R763	4822 116 60319	220 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W

REF. DESIG.	PART NO.	DESCRIPTION
$\Delta$ R769	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R770	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R771	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R772	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R785	4822 116 60246	220 $\Omega$ $\pm$ 5% 1W
$\Delta$ R786	4822 116 60246	220 $\Omega$ $\pm$ 5% 1W
$\Delta$ R787	4822 111 90726	10 $\Omega$ $\pm$ 5% 2W
$\Delta$ R788	4822 111 90726	10 $\Omega$ $\pm$ 5% 2W
$\Delta$ R793	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R794	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R795	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R796	4822 116 80153	0.18 $\Omega$ $\pm$ 10% 5W
$\Delta$ R815	4822 116 52976	1 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R816	4822 116 52976	1 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R817	4822 116 60309	2.2 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R818	4822 116 60309	2.2 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
$\Delta$ R819	4822 116 60307	1 $\Omega$ $\pm$ 5% $\frac{1}{4}$ W
P701-SEMICONDUCTORS		
DN01	4822 130 80837	Diode HSS81TD
DN02	4822 130 80837	Diode HSS81TD
D701	4822 130 80837	Diode HSS81TD
D702	4822 130 80837	Diode HSS81TD
$\Delta$ D801	4822 130 33132	Diode D5FB20
$\Delta$ D802	4822 130 32508	Diode RL103E, etc.
$\Delta$ D811	4822 130 32508	Diode RL103E, etc.
D813	4822 130 33305	Diode 1SS176, etc.
D814	4822 130 33305	Diode 1SS176, etc.
D815	4822 130 33948	Zener HZ6LA3
D816	4822 130 33948	Zener HZ6LA3
$\Delta$ D818	4822 130 32508	Diode RL103E, etc.
$\Delta$ D819	4822 130 32508	Diode RL103E, etc.
D820	4822 130 33305	Diode 1SS176, etc.
D821	4822 130 33305	Diode 1SS176, etc.
P701-RESISTORS		
QN01	4822 130 60839	Transistor 2SC2458(Y, GR)
QN02	4822 209 83312	IC TA7317P
Q701	4822 209 73669	IC NJM5534DD
Q702	4822 209 73669	IC NJM5534DD
Q703	4822 130 43231	Transistor 2SC2240(GR)
Q704	4822 130 43231	Transistor 2SC2240(GR)
Q705	4822 130 42949	Transistor 2SA970(GR)
Q706	4822 130 42949	Transistor 2SA970(GR)
Q711	4822 130 42999	Transistor 2SA1145(O, Y)
Q712	4822 130 42999	Transistor 2SA1145(O, Y)
Q713	4822 130 43283	Transistor 2SC2705(O, Y)
Q714	4822 130 43283	Transistor 2SC2705(O, Y)
Q715	4822 209 73673	IC LA2500
Q716	4822 209 73673	IC LA2500
$\Delta$ Q717	4822 130 60117	Transistor 2SC3419(Y)
$\Delta$ Q718	4822 130 60117	Transistor 2SC3419(Y)
$\Delta$ Q719	4822 130 43283	Transistor 2SC2705(O, Y)
$\Delta$ Q720	4822 130 43283	Transistor 2SC2705(O, Y)
$\Delta$ Q721	4822 130 42999	Transistor 2SA1145(O, Y)
$\Delta$ Q722	4822 130 42999	Transistor 2SA1145(O, Y)
$\Delta$ Q723	4822 130 43311	Transistor 2SC3298(O, Y)
$\Delta$ Q724	4822 130 43311	Transistor 2SC3298(O, Y)

REF. DESIG.	PART NO.	DESCRIPTION
$\Delta$ Q725	4822 130 43023	Transistor 2SA1306(O, Y)
$\Delta$ Q726	4822 130 43023	Transistor 2SA1306(O, Y)
$\Delta$ Q727	4822 130 43306	Transistor 2SC3182(R, O)
$\Delta$ Q728	4822 130 43306	Transistor 2SC3182(R, O)
$\Delta$ Q729	4822 130 43019	Transistor 2SA1265(R, O)
$\Delta$ Q730	4822 130 43019	Transistor 2SA1265(R, O)
$\Delta$ Q731	4822 130 43306	Transistor 2SC3182(R, O)
$\Delta$ Q732	4822 130 43306	Transistor 2SC3182(R, O)
$\Delta$ Q733	4822 130 43019	Transistor 2SA1265(R, O)
$\Delta$ Q734	4822 130 43019	Transistor 2SA1265(R, O)
$\Delta$ Q735	4822 130 43231	Transistor 2SC2240(GR)
$\Delta$ Q736	4822 130 43231	Transistor 2SC2240(GR)
$\Delta$ Q737	4822 130 42951	Transistor 2SA970(GR, BL)
$\Delta$ Q738	4822 130 42951	Transistor 2SA970(GR, BL)
$\Delta$ Q801	4822 130 61363	Transistor 2SD1913(Q, R)
$\Delta$ Q802	4822 130 61359	Transistor 2SB1274(Q, R)
$\Delta$ Q805	4822 130 60107	Transistor 2SA1048(Y, GR)
$\Delta$ Q806	4822 130 60839	Transistor 2SC2458(Y, GR)
$\Delta$ Q807	4822 130 60107	Transistor 2SA1048(Y, GR)
$\Delta$ Q808	4822 130 60839	Transistor 2SC2458(Y, GR)
$\Delta$ Q810	4822 209 73674	IC NJM7806FA
$\Delta$ Q811	4822 130 60107	Transistor 2SA1048(Y, GR)
$\Delta$ Q812	4822 130 60839	Transistor 2SC2458(Y, GR)
P701-MISCELLANEOUS		
J701	4822 265 30473	Plug, 6P
J702	4822 265 20205	Plug, 3P
J703	4822 265 10093	Jack, 3P
J801</		

## 10. TECHNICAL SPECIFICATIONS (DIN)

### Audio Section

#### IHF Dynamic Power

2 Ohms .....	220 W
4 Ohms .....	160 W
8 Ohms .....	125 W

#### Power Output per Channel

DIN 4 Ohms at 1 kHz .....	130 W
RMS 4 Ohms .....	120 W
DIN 8 Ohms at 1 kHz .....	110 W
RMS 8 Ohms .....	100 W

Total Harmonic Distortion at RMS 8 Ohms .....	0.02%
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I.M. Distortion .....	0.02%
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Damping Factor 8 Ohms (1 kHz) .....	100
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#### MM Cartridge Input

Frequency Response (IEC RIAA) .....	±0.5 dB
Signal To Noise Ratio (A weighted) .....	86 dB
Input Impedance .....	47 kOhms
Input Sensitivity .....	2.5 mV

#### MC Cartridge Input

Input Sensitivity .....	250 µV
Input Impedance .....	100 Ohms
Signal To Noise Ratio (A weighted) .....	72 dB

#### CD-Tuner-Tape Input

Input Impedance .....	20 kOhms
Input Sensitivity .....	150 mV
Frequency Response .....	10 Hz – 70 kHz
Signal To Noise Ratio (A weighted, IHF 202) .....	88 dB
(A weighted, VR MAX) .....	103 dB

#### Output Voltage and Impedance

Tape Out [Phono] 5.0 mV 1 kHz Input] .....	300 mV/1 kOhms
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#### Channel Separation [CD Input]. (IHF 202, 1 kHz)

#### Digital Section

Frequency Response (10 Hz – 20 kHz) .....	±1.0 dB
Total Harmonic Distortion .....	0.0035%
Signal To Noise Ratio (A weighted at TAPE OUT) .....	103 dB
Dynamic Range .....	96 dB

#### General

Power Requirements N and T versions .....	220/240 V AC, 50/60 Hz
E version .....	110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both channels operating .....	200 W
Dimensions (W × H × D) .....	420 × 132 × 334 mm
Weight .....	13 kg

**"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY — ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY REPAIR BY ANY MARANTZ SERVICE CENTRE —"**

#### Kind of Common Parts

##### RESISTOR

R\*\*\* (1) GD05 .... 140, Carbon film fixed resistor, ±5% 1/4W  
 R\*\*\* (2) GD05 .... 160, Carbon film fixed resistor, ±5% 1/6W

##### C\*\*\* : CERAMIC CAP.

(1) DD1 .... 370, Ceramic condenser, disc type (titan condenser)  
 Temp. coeff. P350 to N1000 50V

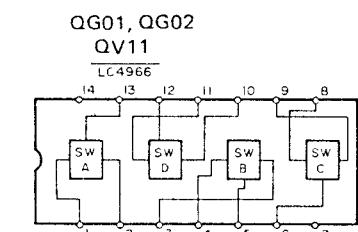
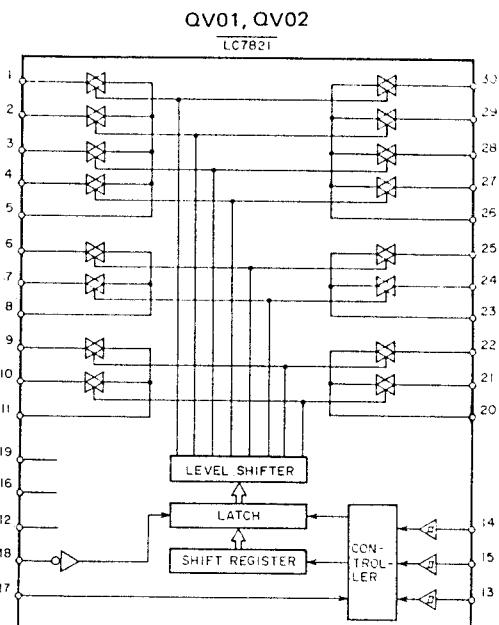
##### C\*\*\* : CERAMIC CAP.

(1) DK16 .... 300, High dielectric constant ceramic condenser, disc type (titan variable)  
 Temp. chara. 2B4 50V

##### C\*\*\* : ELECTROLY CAP. ( )/FILM CAP. ( )

(1) EA .... 10, Electrolytic condenser, one-way lead type, tolerance ±20%  
 (2) DF15 .... 350, Plastic film condenser, one-way type, Mylar, ±5% 50V

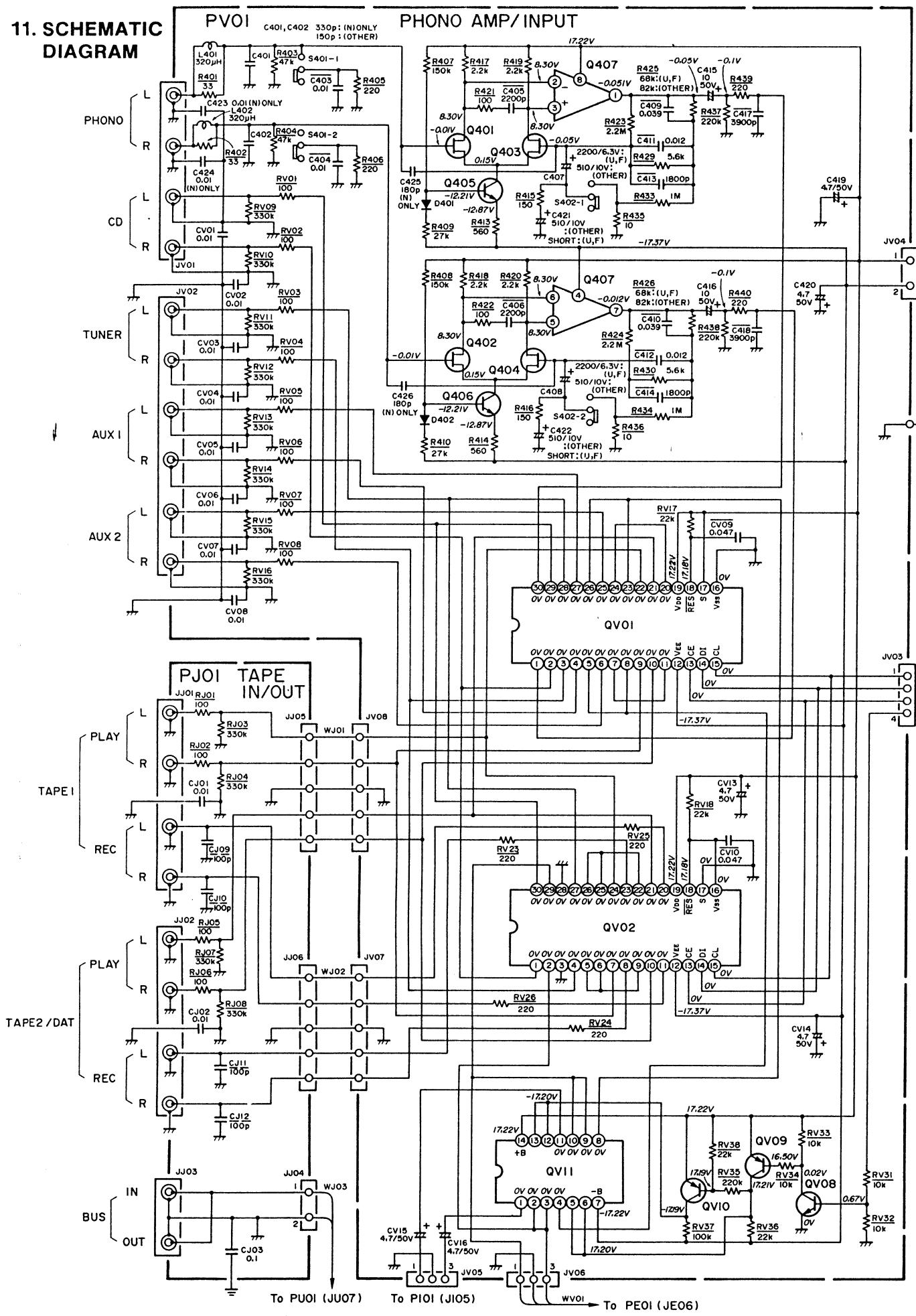
\* In case of ordering the common parts, please establish the correct parts number of 10 figures by the procedure "ASSIGNMENT OF COMMON PARTS CODES"



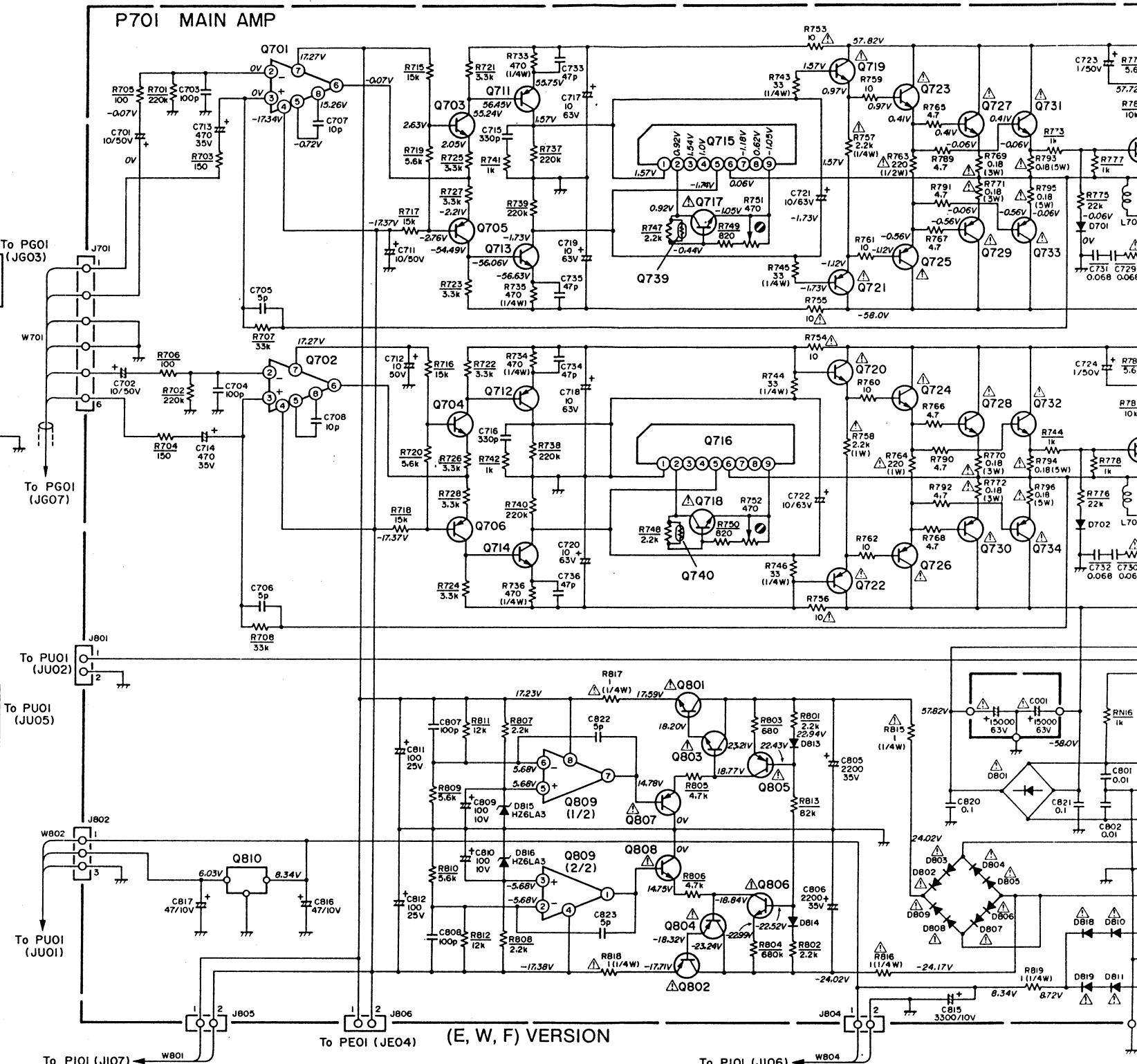
#### NOTE ON SAFETY:

Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

## 11. SCHEMATIC DIAGRAM

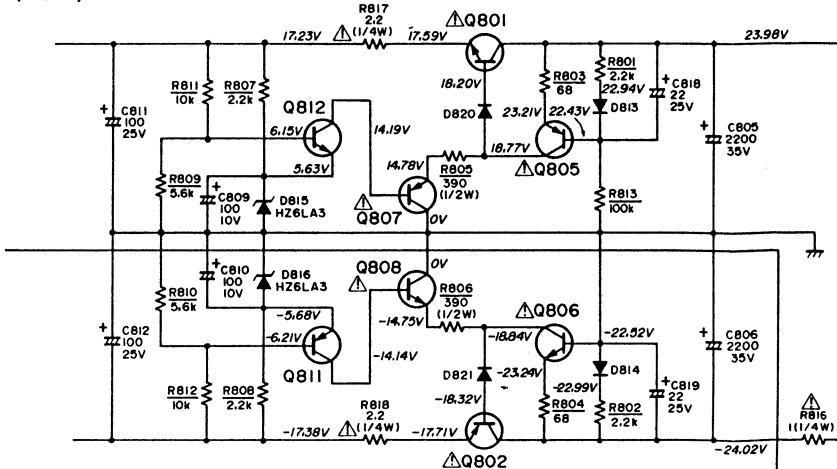


P701 MAIN AMP

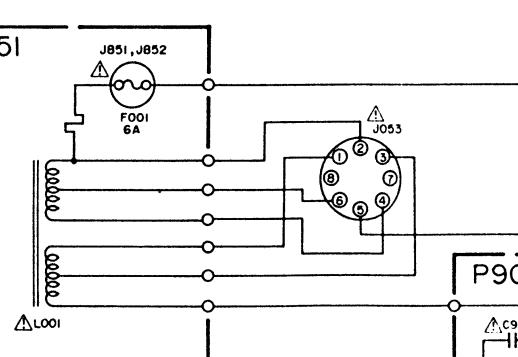


To PILOT (J107) ← w801 10 FEB (JES-4) ( ) ( ) ( )

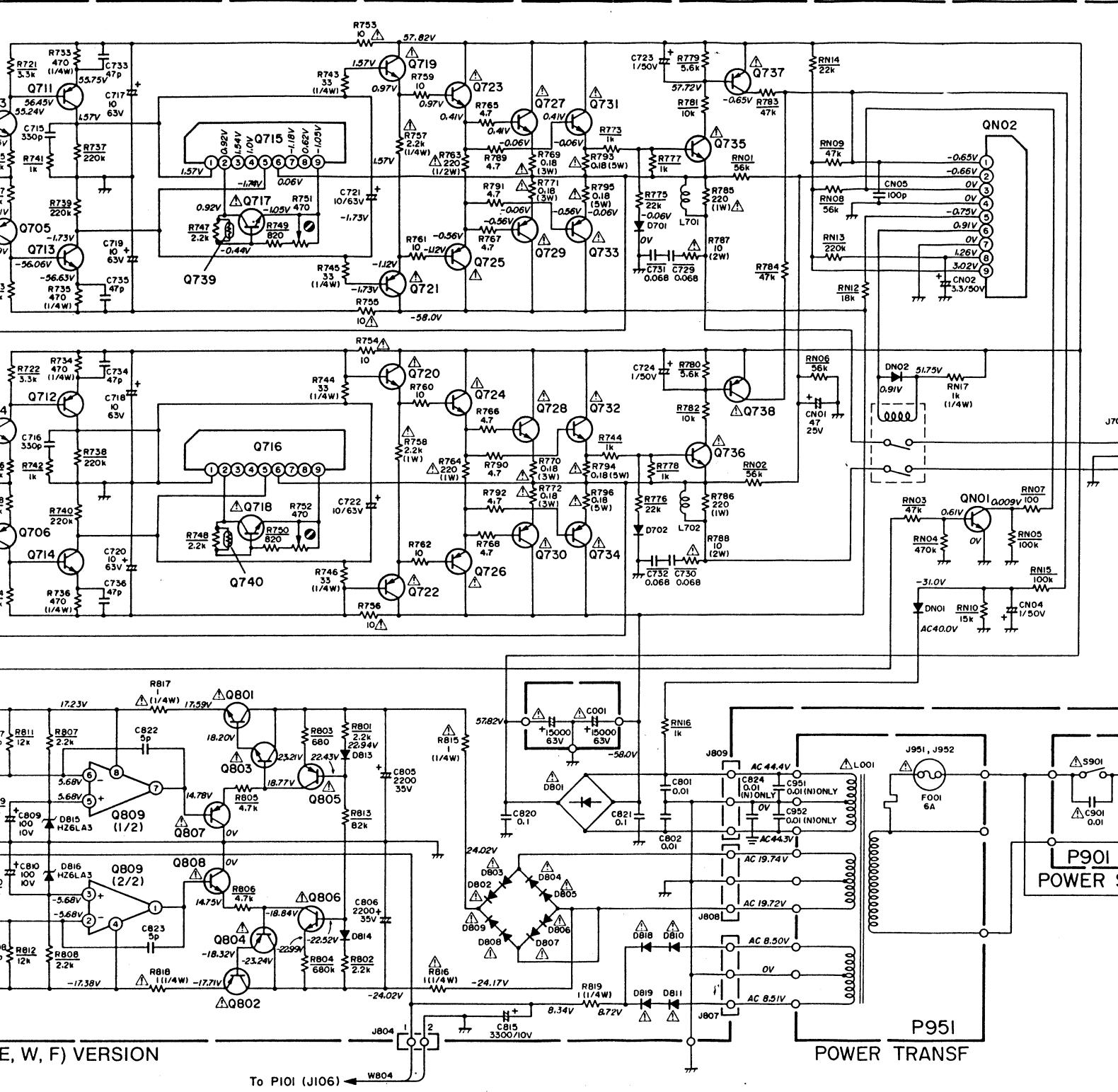
(N, T) VERSION



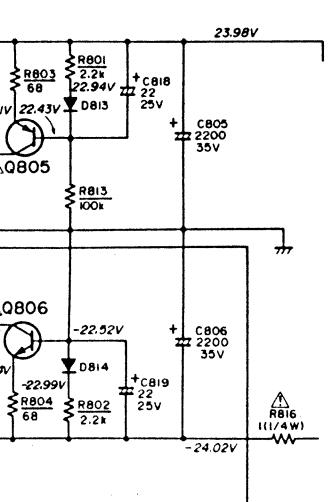
P85



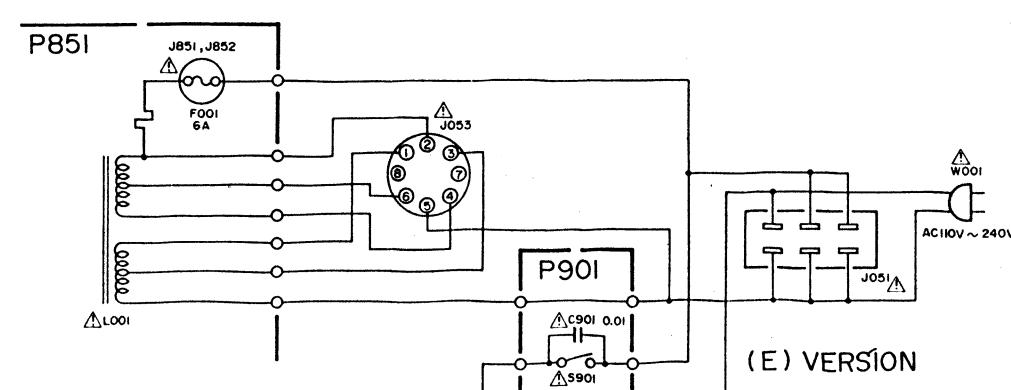
# Model PM-75



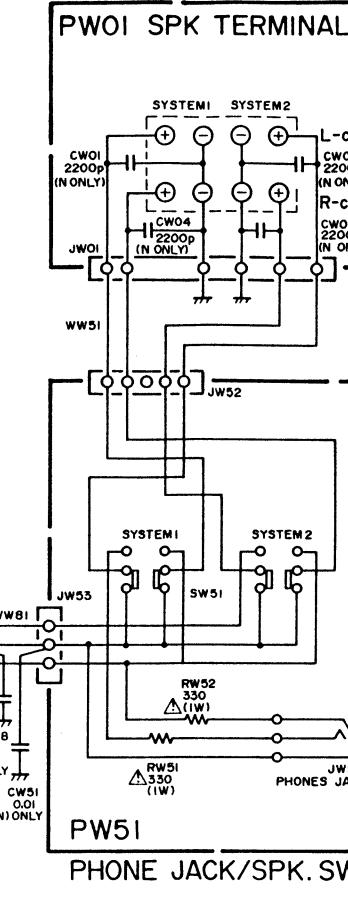
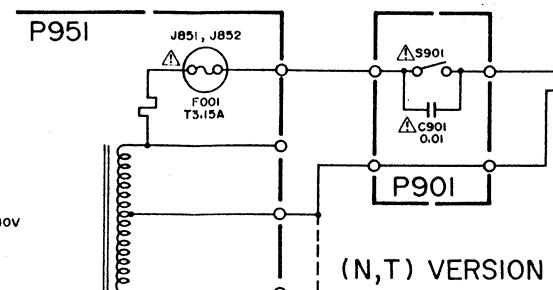
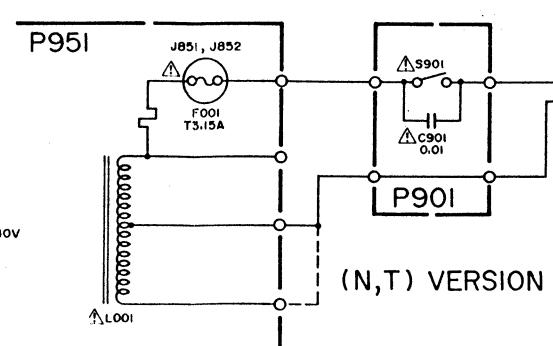
E, W, F VERSION



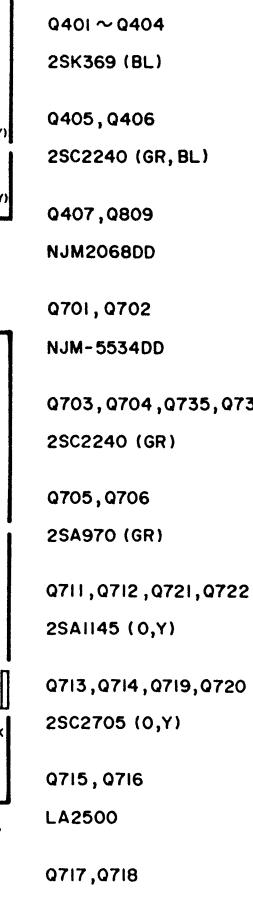
P851



P951



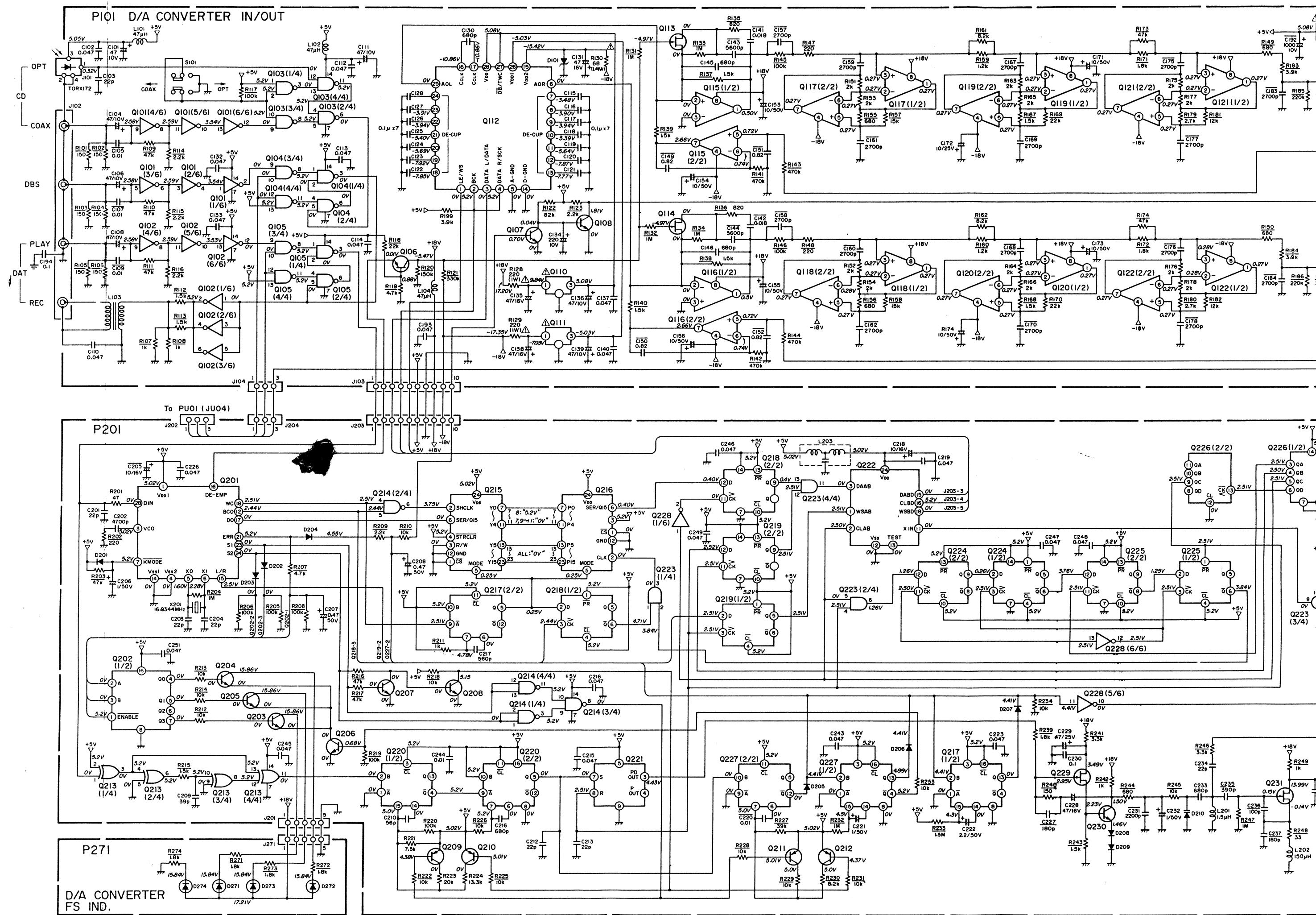
PW01  
PHONE JACK/SPK. SW.

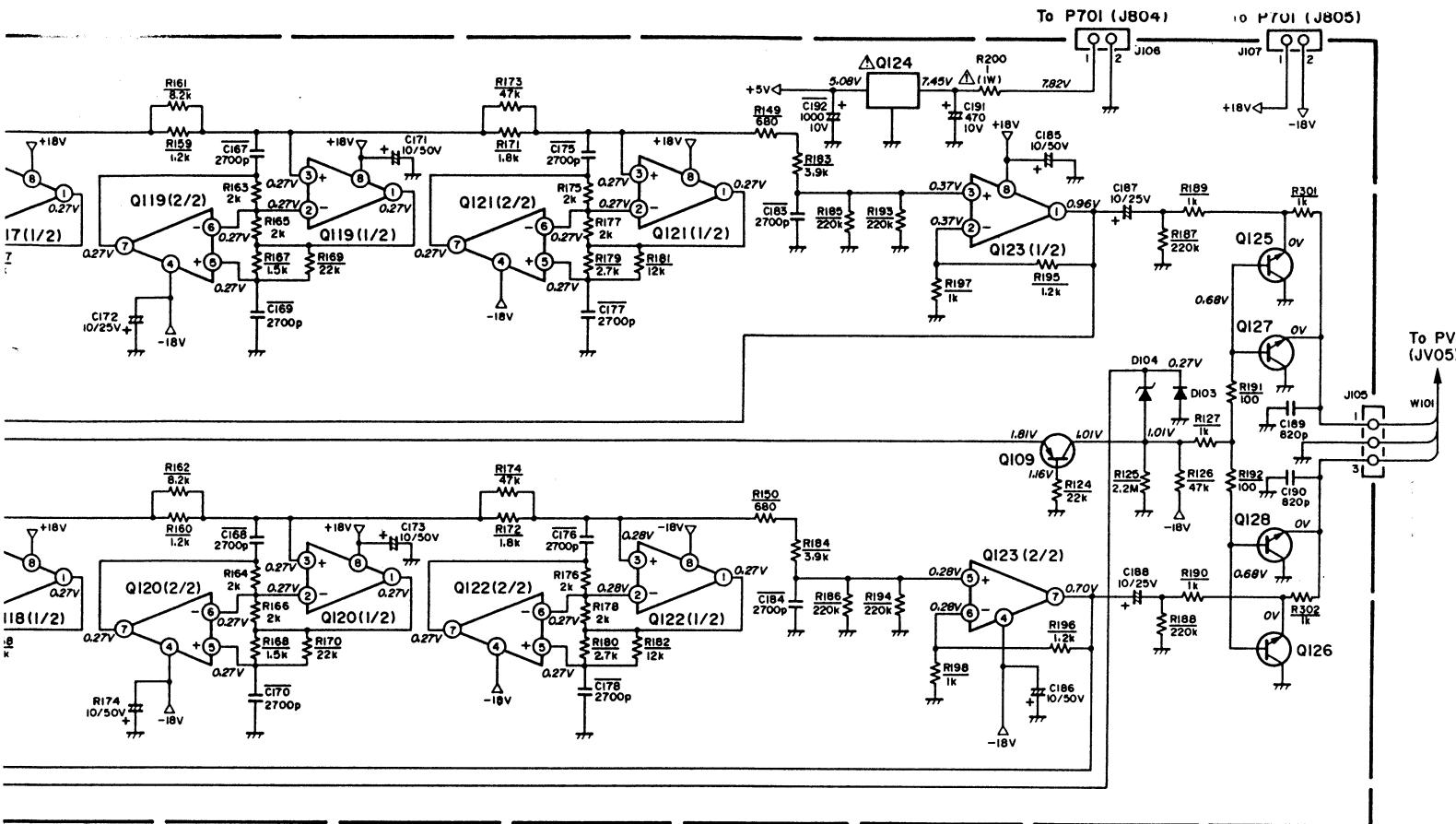


PW51  
PHONE JACK/SPK. SW.

- Q401 ~ Q404
- QN02
- TA7317P
- Q405, Q406
- 2SC2240 (GR, BL)
- LC7821
- Q407, Q809
- NJM2068DD
- Q701, Q702
- NJM-5534DD
- Q703, Q704, Q735, Q736
- 2SC2240 (GR)
- ISSI76, etc.
- D701, D702
- DN01, DN02
- HSS81TD
- Q711, Q712, Q721, Q722
- 2SA1145 (0, Y)
- Q713, Q714, Q719, Q720
- 2SC2705 (0, Y)
- Q715, Q716
- LA2500
- Q717, Q718
- 2SC3419 (Y)
- Q723, Q724
- 2SC3298 (0, Y)
- Q725, Q726
- 2SA1306 (0, Y)
- Q727, Q728, Q731, Q732
- 2SC3182 (R, 0)
- Q729, Q730, Q733, Q734
- 2SA1265 (R, 0)
- Q737, Q738
- 2SA970 (GR, BL)
- Q801
- 2SD1913 (Q, R)
- Q802
- 2SC3298 (0, Y)
- 2SA1306 (0, Y)
- Q803
- 2SB1274 (Q, R)

5.6V

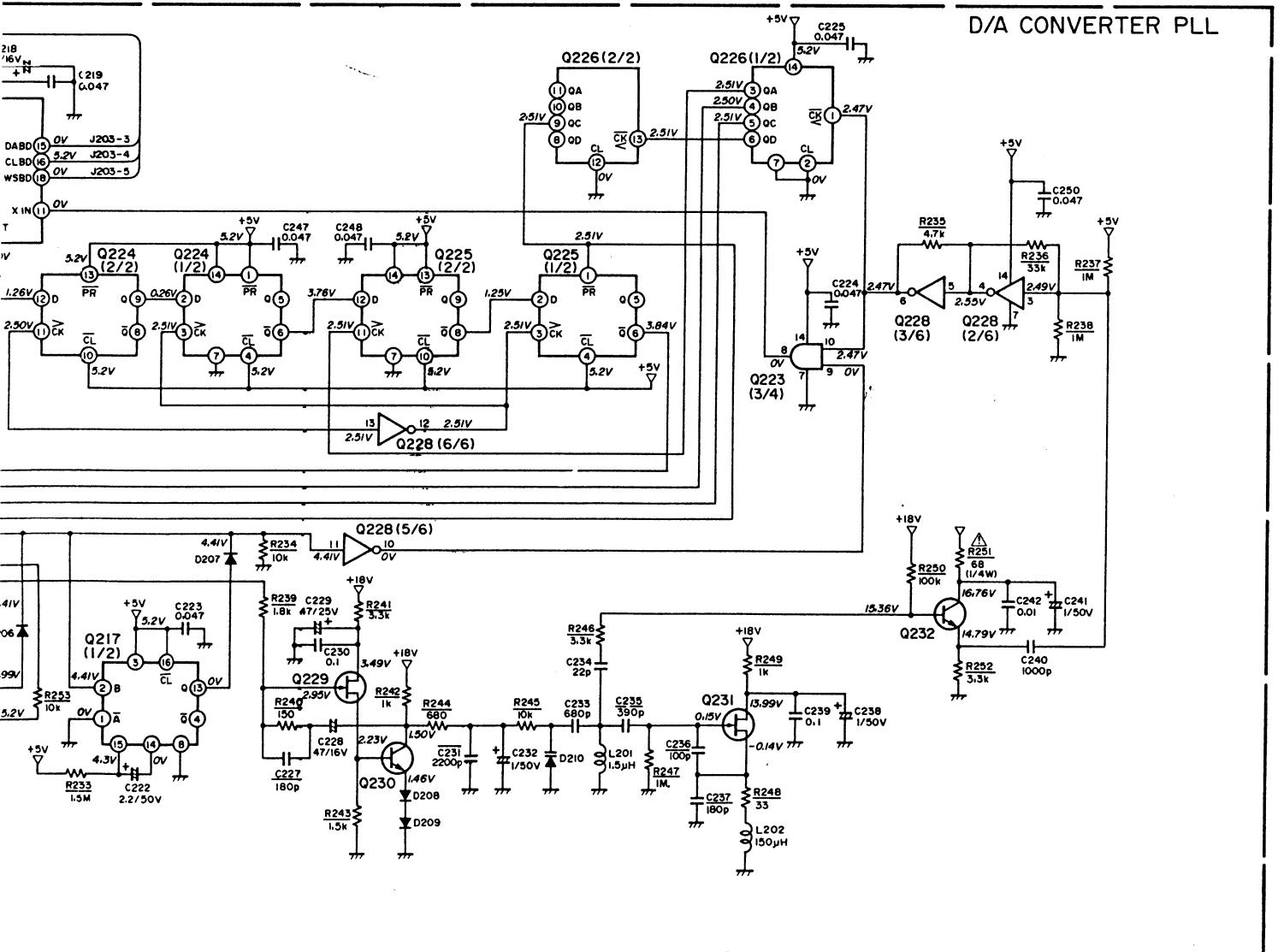


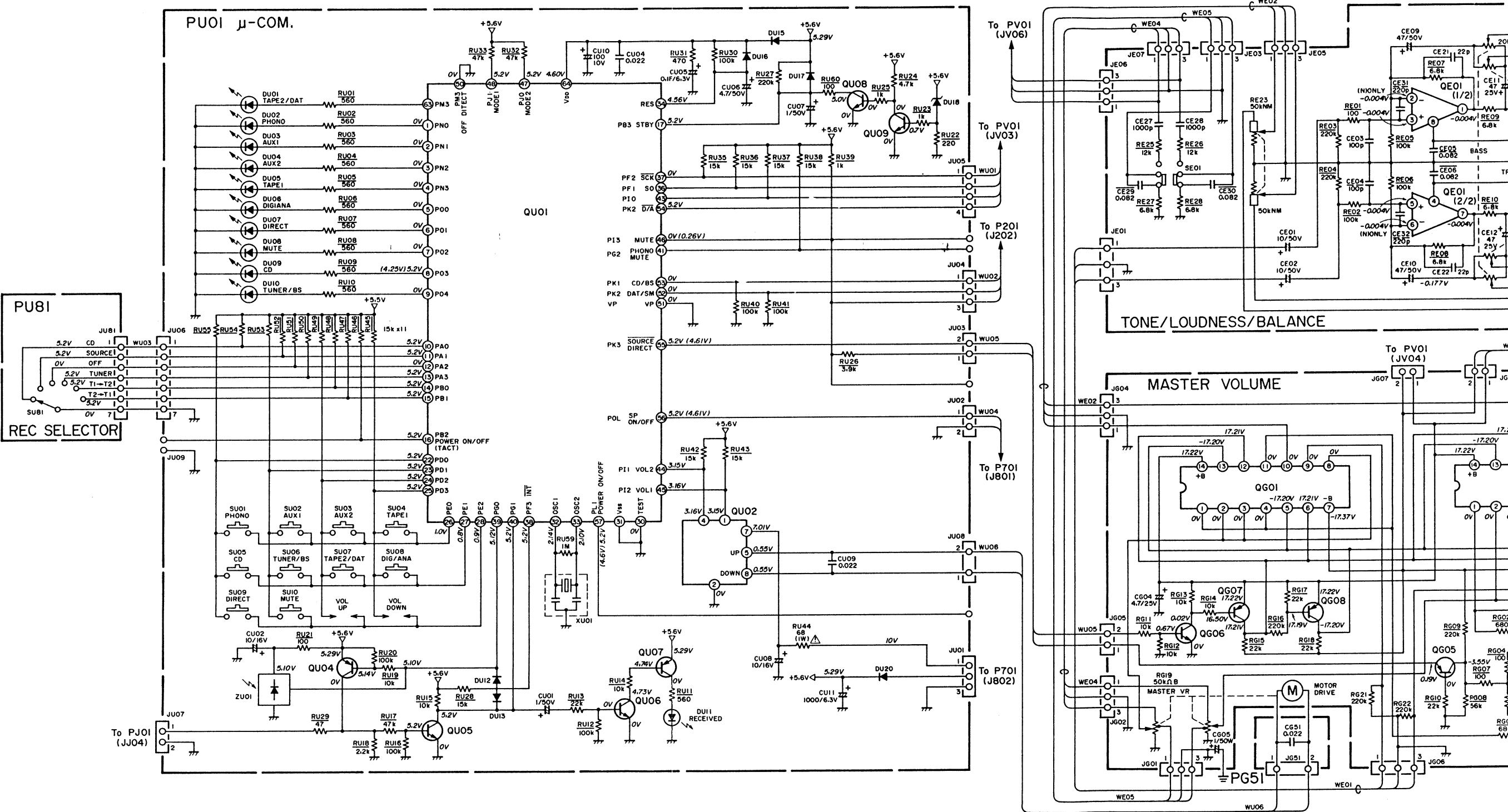


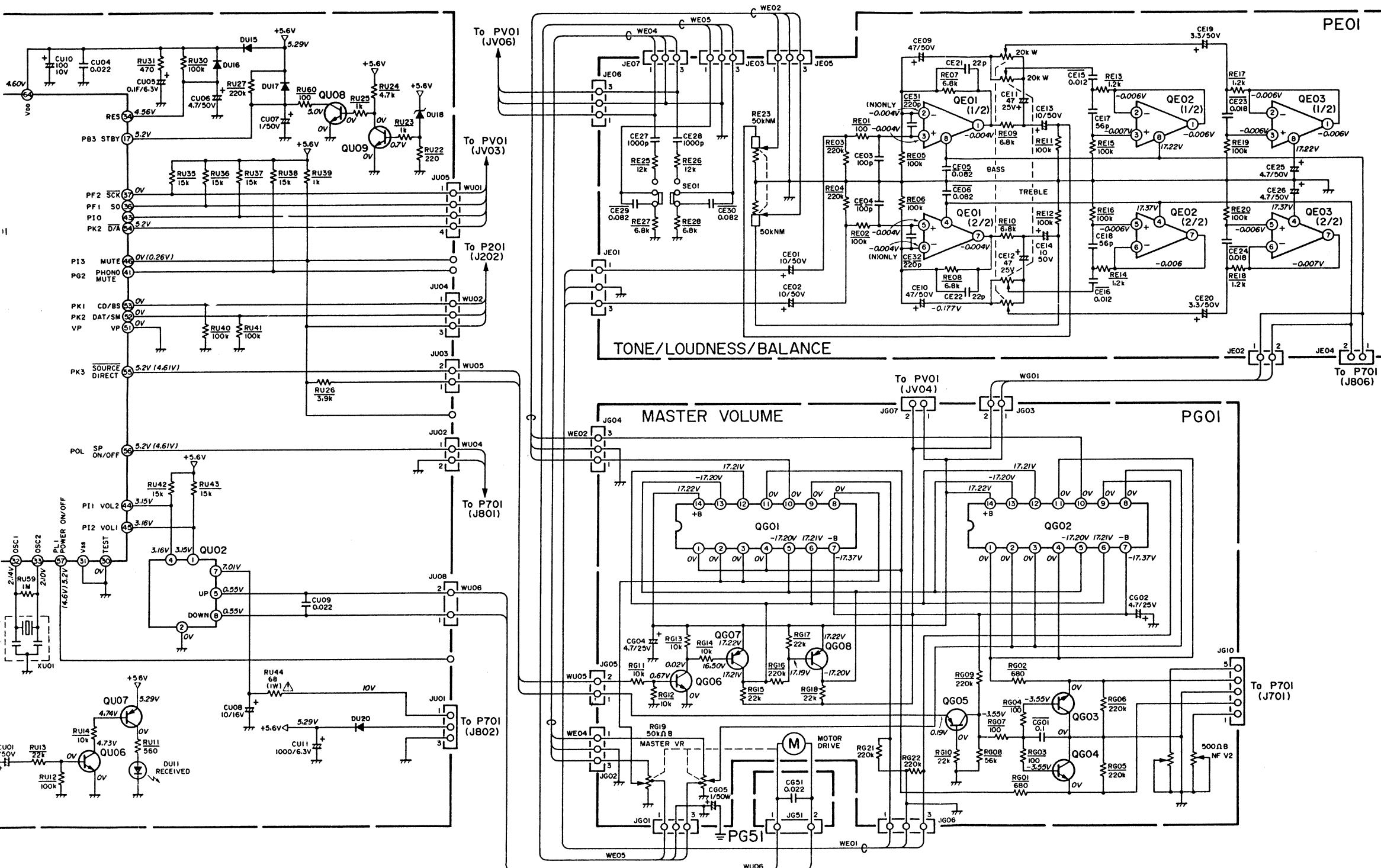
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## D/A CONVERTER PLL

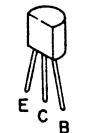
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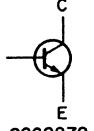




QE01~QE03  
NJM4558DD



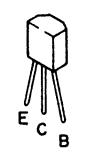
QG01, QG02  
LC4966



QG03, QG04  
2SC2878

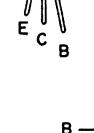


QG05, QG07, QG08  
QU04, QU07



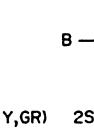
2SA1048 (Y, GR)

QG06, QU05, QU06  
QU08, QU09



2SC2458 (Y, GR)

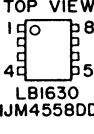
QU01  
LC6554H



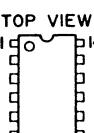
QU02  
LBI630



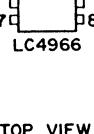
DUI1~DUI11  
LT3D8B



DUI2, DUI3, DUI6, DUI7  
ISSI76, etc.



DUI8  
3.6V



DUI5, DUI20  
S56886

